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LATIN IN THE HIGH SCHOOL.

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The educational value of the different high school studies has received considerable attention in recent years, not only in this country but also, and even more so, in Germany. This question is of special interest when the importance and the pre-eminence of certain school studies is questioned with the idea that they may, in many cases, cost more than they are worth. The storm has been raging especially about the classic languages, which have had a pre-eminent place in secondary curricula ever since the days of Sturm. Until quite recent years no one was considered cultured unless he had studied Latin, and possibly Greek, a certain number of years, and to those two languages was given the first place in the programmes of study. With the advance of modern science and the modern languages, their place gradually has been disputed until now, when they are slowly and reluctantly taking their place among other subjects of study, and, like other studies, the student pursues them when they are necessary, or helpful, or interesting in the line of work he is pursuing. In connection with the discussion of recent years it is interesting to see the results of studies that have been made to ascertain what has been accomplished in the study of the classical languages in the secondary schools.

Prof. Nelson G. McCrea recently tabulated the results of the Latin papers of the College Entrance Examination Board for the first three years. He read 8,896 papers but reports only those that received a rating of from 60-100 per cent. The papers on Cæsar, Cicero, and Vergil ranged from 58-88%, but the average of all the grammar papers was 41%, of all the elementary composition papers about 42%, and of the ad-

vanced composition papers about 31% for the three years. He says, "We can scarcely view these figures with equanimity, much less gain from them hopefulness for the future position in education of a subject whose claims are now so seriously challenged." He thinks this condition of things can be remedied if the Latin teacher focuses on the Latin syntax and vocabulary and not on Roman history, religion, archæology, etc. He says for the successful performance of the work that it ought to do in Latin the college requires that students at entrance should have (1) a working vocabulary of from 2,000-2,500 words which they can use with equal readiness in translating Latin into English and English into Latin, *i. e.*, which they really know; (2) a ready control of all the fundamental principles of syntax. He proposes a plan by means of which the student shall know at the end of the first year at least 300 words, at the end of the second 400 more, at the end of the third 700 more, at the end of the fourth 800 more, making a total of 2,200 words which the student can use freely in translating from one language into the other. These results, he admits, are not obtained at the present time.

Thorndike asked a number of students of Latin the following questions: (1) Was Cicero courageous? (2) In which were the Romans most proficient, making laws, writing books, or building beautiful buildings? (3) Which were the Romans most like, the English or the Americans? Why? (4) Is there any other reason for reading Cæsar besides the wish to learn the Latin language? The answers obtained lead him to the conclusion that it seems fairly sure that the average high school student is more likely to be misinformed than instructed about Roman history by his year's reading of Cicero. He gets only a superficial stratum of fact and may be utterly mistaken in his interpretation of it. The text seems to have failed signally to arouse any useful interest in the man Cicero or the times.

In 1903-04 I made a rough test as to a student's Latin vocabulary as follows: The whole Latin vocabulary at the end of Collar and Daniel's First Latin Book was printed, without the definition, leaving space enough on the galleys for the student to write the definition to the right of the word. Thirty-five students were tested: a class of 24 and a class of 11. The class of 24 had completed second year Latin and therefore was also given a list of words from the Gate to Cæsar, their second year text, including only those words not found in Collar and Daniel. The class of 11 was a first year Latin class in the 9th grade, who had studied Latin a little over a year—about 1½ years. The list from Gate to Cæsar was given the class complete; it contained about 450 words. The list from Collar and

Daniel was not given complete, the second year class accidentally lost a few of their Latin hours at the end of the year, and the 9th grade class could not give the required time to the work. In the latter case a test-list was made by having an expert strike out the most common and the rarest words in the book, one of one kind for one of the other, until the whole list was reduced from 1,168 to 685 words. For the second year high school class the new words in the fables in Collar and Daniel had to be struck out since the class had omitted that part of the book.

In each test the words given were so mixed that the pupil could not readily remember what part of the vocabulary he had gone over. Furthermore, in the second year class these tests were thrown in incidentally during a few weeks so that the student was not aware that they were coming and so probably did not make special preparation. In the 9th grade class the tests, by mistake, were given one after another in regular succession. It should also be mentioned that in this last case the teacher knew about six months in advance that these tests were coming, introducing a possible unconscious psychological factor which might influence the results.

The following instructions were given to each pupil: (1) Write the name, date, and age at the top of each paper. (2) Write the definition of the word to the right. (3) Do not stop at words you do not readily recall, but go on writing those definitions you do recall. If you get through the list before the time is up, go through the list again, filling in if you can, those words you skipped the first time. Try to get over the whole list at least once. This last precaution was given for fear that the student might stop to think at the first word he did not know, and thus confuse himself and lose valuable time which he should use to define the words he did know. The high school class was given about 230 words to go over in a session of 45 minutes and the 9th grade about 137 in a session of 25-30 minutes. Care was taken to note during the first tests whether the lists were too long, but it was found that the pupils had time enough to write the definitions of the words they did know. The high school class went over about 910 words out of a total of about 1,618, and the 9th grade class over 685 out of a total of 1,168. Thus in both cases more than 50% of the total number of words the pupils had met in their work were comprised in the lists.

In the schools where these data were gathered it was a standing request of the principal that the Latin teachers give special attention towards the pupils' acquiring a good Latin vocabulary. It should also be stated that the 9th grade class was reported by the teacher as an exceptionally bright

class, not only in Latin but in their studies in general, and that the high school class was unusually poor in Latin. This latter was a college preparatory class and many of the students took Latin only because their fathers insisted on their doing so because it was demanded for entrance to college. The study of Latin seemed to be a perfect bore to many of them and they wasted the teacher's nerves without gaining any appreciable results, as the returns show and as the teacher herself admitted. All these facts were unknown to the writer before hand, but were gathered while the tests were in progress and were given with frankness and sincerity.

Any one will readily see that the looking over and correcting such a list of words is quite a difficult matter. To credit the pupil with such words only which he defined absolutely correctly according to the book definition was doing him a possible injustice, since in free translation a word may be used in a way different from the orthodox vocabulary use and therefore the definition given by the pupil might vary from the strict use somewhat widely and yet the sentence might be so constructed in English that the definition would be correct. It was therefore deemed better to credit the pupil with every definition that could be construed in his favor and mark wrong only those which were absolutely missed. This method is, indeed, not free from error but the writer felt that he would rather err in the direction of leniency.

The classification of the words into parts of speech was considered of no great value since it is difficult to tell which words occur the oftenest in the text. Nouns undoubtedly occur oftener than verbs and so we find that they are better remembered. In the list given the pupils the number of nouns exceeded the number of verbs by 1½%, but 56% of the nouns were defined correctly and only 42% of the verbs. It was also hard to determine whether the parts of speech were properly recognized, especially so where the definition consists of but one word.

In the following tables are given the percentages and the number of words that were marked correct. In table I, giving the result of the high school class, the percentage in Collar and Daniel is based on 460 words, in Gate to Cæsar on 450, unless otherwise indicated. In table II, 9th grade class, the percentage is based on 685 words. The mark * means absent at one test.

TABLE I. BOYS.

	Coll. and Dan.	Gate to Cæsar.	Average %	No. of Words.
1.	49%	18%*	33.5	542
2.	40 "	21 "	30.5	494

	Coll. and Dan.	Gate to Cæsar.	Average %.	No. of Words.
3.	42%	17%	29.5	477
4.	41 "	16 "	28.5	461
5.	30 "	14 "	22.	356
6.	29 "	15 "	22.	356
7.	13 " *	10 "	11.5	186
8.	19 "	00.3%*	9.5	154
9.	18 " *	00.2%*	9.	146
Average	31%	12.4%	22%	352

TABLE I, Continued, GIRLS.

	Coll. and Dan.	Gate to Cæsar.	Average %	No. of Words
1.	75%	54%	64.5	1,044
2.	72 "	47 "	59.5	961
3.	67 " *	34 "	50.5	817
4.	63 "	36 "	49.5	800
5.	64 "	35 "	49.5	800
6.	60 "	37 "	48.5	784
7.	61 "	31 "	46	744
8.	55 "	27 " *	41	663
9.	56 "	25 "	40.5	655
10.	48 "	27 " *	37.5	606
11.	45 "	24 " *	34.5	558
12.	38 "	21 "	29.5	348
13.	29 "	14 "	21.5	324
14.	30 " *	10 "	20.	315
15.	24 "	00.5%	12.	194
Average	52.5%	28%	40.3%	641

TABLE II.

Girls.			*Boys.*		
	Per cent.	No. of Words.		Per cent.	No. of Words.
1.	76	887	1.	63	736
2.	75	876	2.	58	677
3.	72	841	3.	46	537
4.	72	841	Average	55.6%	650
5.	62	724			
6.	55	642			
7.	55	642			
8.	53	619			
Average	65%	759			

It may be interesting to compare these high school pupils' Latin vocabularies with the vocabularies of children about two years of age. As we see from the above tables, the highest of

the boys had about 550 words, and all the rest were below 500; more than half of them were below 400 and the three lowest were below 200. Of the new words they met in the second year Latin, two of the boys had one word each and one girl had 2. The girls have a higher percentage. Seven are above 700 and all but four have a higher percentage than the highest of the boys; only one is below 200. Taking the class as a whole, more than two-thirds of the class had their vocabulary below 700 and just ½ had theirs below 500 words. The vocabularies of little children 24-30 months old, as given by Tracy, are as follows: 24 mo., 285, 263, 250, 139; 26 mos., 171; 27 mos., 677, 451; 30 mos., 327. Mrs. K. C. Moore's child had 475 words at 24 months, and Harlow Gale's three children had 783, 741, and 729 respectively; the two girls of Professor West, as reported by M. C. and H. Gale, had 614 and 578 respectively, and the boy 115 at the age of two years. The vocabulary of Humphrey's child was 1,121, of Deville's 739, and that of Marion Martindell 783 at the age of two.

Many of the mistakes where words were defined wrong were due to various causes. Sometimes words of similar sounds and looks were confused in the student's mind, as for instance when he confused *poena* and *Poenus*, *puto* and *pono*, *cupio* and *capio*. It also sometimes happened that the pupil gave the opposite meaning as when he said *lugeo* means "rejoice." Many mistakes were due to wrong guesses or to wrong associations, or to both working together; good examples are *fatum* = "plump," *mos* = "mouse," *dens* = "thick," etc. Errors on guesses were rather more frequent with the bright pupil than with the dull one. In some cases the dull pupil seemingly did not have orientation enough to see even the plainest analogies. Again, the number of errors in the beginning class is somewhat higher than those in the high school class in Collar and Daniel, but the errors of the latter class in the list from Gate to Cæsar are by far the most numerous, more than twice as many errors being made than in the list from Collar and Daniel. The percentage of errors for the 9th grade was 7%, for the high school class it was 6% for the list from Collar and Daniel and 15% for the list from Gate to Cæsar. This may indicate that with time the line of demarcation between known and unknown words becomes more distinct, or this difference may be due to the fact that a certain number of words from Collar and Daniel were repeated in Gate to Cæsar and so became fixed, whereas all the hazy words of the year before were forgotten. However, it is also in some measure due to wrongly defining the Latin word by its English analogue. "Errors" in this paragraph does not include words left blank.

A comparison of these children's vocabularies with the ideal one suggested by McCrea can hardly be made since these children were not taught by the method suggested by him, and, moreover, their vocabularies are of words they recognize at sight and not such as they can use in translating from English into Latin as well as from Latin into English. It is evident that their vocabulary which they can use in translating both ways is much more limited than that which the table would indicate, yet, applying the percentages to the complete vocabularies of the texts, many of the second year pupils have, according to the table, a much smaller vocabulary than 700 words. None of the boys had even 600 and eight of the girls were below 700.

We see that the 9th grade has a much higer percentage of correct results than the other class. There are several explanations which suggest themselves. In the first place, the class as a whole is a brighter class, and secondly, the whole vocabulary was still fresher in their mind, they having begun Latin a little over a year previous. Furthermore, being younger than the other class, they were yet closer to the so-called period of verbal interest and verbal memory. The difference in the average ages of the two classes is about 1½ years. And I should again refer to the factors mentioned before, especially to the fact that the tests were given on successive days which may have led the pupils to make special preparation. The results did show that some special preparation may have been made in some cases. All showed improvement in the second test and some showed decided improvement, but only two had the last four tests higher than the first, and six made the last three tests on about the same level of correct results as the first, whereas three showed a falling off. Moreover, this class held more closely to the text-book definition than the other, probably partly because they had a better verbal memory, partly because they had closer vocabulary drill, and partly because they may have made special efforts to review the text-book vocabulary from day to day while the tests were in progress. It is true, most of these children defined more than enough words to meet Professor McCrea's standard, but, whether they satisfy that standard cannot be determined since from the tests one cannot tell how many words they were able to use freely in translating Latin into English as well as English into Latin.

It was interesting to note that many words, especially in the list from Gate to Cæsar, were defined rather in their English than in their truly Latin use, *i. e.*, the pupils gave the definition of the English derivative instead of that of the Latin word. Many of these words, it is true, might have a meaning, often figuratively, similar to that of the English derivative, but the

student had probably never met them in any other but their truly Latin sense, since the text vocabulary gave only the strictly Latin use. For example, *arbitror*=arbitrate, *eruptio*= eruption, illustrates what I mean. Here we have Latin interpreted in the light of the English and not English by means of Latin. It is, therefore, doubtful whether these students really strengthened their English vocabulary by means of the Latin; they rather seemed to use their English words to get an acquaintance with Latin, thus reversing the process which is supposed to take place.

All the boys in the high school class belong to those who did the poorest. There were nine boys in the class, six of whom were below 30% and 33.5% was the highest average made by any boy. Whereas of the 15 girls three were above 50%, six others, or 9 in all were above 40% and only 4 were below 30%. The highest average per cent. made by any girl in this class was 64.5. The average of correct results by all girls is 40.3%, of the boys only 21.7%. That is, the standing of the girls is almost twice as good as that of the boys. In the 9th grade class there were only three boys, one stood fifth, one seventh, and one lowest.

What is the cause of this difference between the sexes? Numerous explanations might be offered. It should be added here that the number of students involved in this study is too small to permit of definite and authoritative generalizations and that the number would have been increased were it not that such an investigation takes so much of the pupil's time. However, some suggestions and possible explanations may be in place. It is well known that studies that have commercial, industrial, political and other practical bearings are more interesting to boys, but that has more specially a tendency to reduce the number of boys taking Latin or Greek, if they have any say so in the matter. In this case a number, if not all, of the boys took Latin not because they liked it or felt the need of it, but simply because their fathers insisted that they take it because it was required for admission to college. They were not dull boys as the Latin teacher very well knew and as the high school record shows. They had good records in other studies even in French and German, but the Latin did not appeal to them and so under compulsion did they remain in the class as an almost absolute dead-weight. That some of these boys did absolutely nothing in the second year Latin class is quite evident, not only from the returns but from other testimony. They did even worse than nothing; they were cultivating habits of carelessness and idleness which stifle all impulses to that healthful activity without which not only school work, but life itself is a burden and a failure. These

boys were buying their Latin at a fearful cost—were they not paying too much for their whistle?

Another part explanation may be found in the fact that at this age boys would do better under the more sturdy influence of a male teacher. These boys had not only all their Latin training but almost, if not quite, all their other training under female teachers, and it is possible that with them that natural and healthy reaction against too much woman's influence, however good and refining it may be in its way, had come—a reaction which is apt to come in every true and vigorous boy, and which should be respected in the organization of our schools. With proper attention given to the nature of boyhood even this to them uninteresting study might have yielded better results. Professor Armstrong, of the Mosley Commission, says that the distinctly low average of attainment in our high schools is in large part due to the preponderance of women teachers. It seems to the writer a sign in the right direction that the percentage of female teachers in our secondary schools has slightly decreased in the last few years.

In the Report of the Committee of Twelve of the American Philological Association the fact is emphasized that the increase in the number of Latin students in secondary schools from 1889–90 to 1897–98 had been 174%, more than twice the increase in the number of secondary students, and this increase was ascribed to an increase in the interest in Latin studies and it was suggested that this would mean an increased interest in Greek. It may well be asked how much of this increase is due to interest and how much to a onesided and abnormal conception of the parent or the school who forces this Latin upon the student much as the biscuit was forced upon Gulliver, simply because tradition, supported yet by most colleges, says Latin is basal in all education above the common school. How much is this increase due to the interest of the student and how much to the pedagogical conditions which furnish us teachers who can teach Latin as dead languages are taught, but not teachers who can teach a living language in a living way. It is quite certain that a number of the members of this Latin class are innocent of wilfully increasing the total number of Latin students in this country, and how many more such students there are further investigation only can reveal. And how many there are who make a creditable record only by struggling against the stream with all their might, who, under the halo of reverence that clings to classical learning, believe that by a few years of Latin study they become wise and cultivated men and women, though they drop the study the minute the high school course is ended, we may never know. Whereas, if the same time and energy (and the amount of available

energy increases if the friction decreases) were given to some study of more live interest it would lead the pupil into lines of reading and study which would be to him not only a source of information and culture, but of interest and pleasure as well in after life. Those who believe that to pursue difficult uninteresting studies is a good preparation for the difficult battles of life, forget that probably all true successes in life are made by men who are interested in what they do. Interest does not mean easiness; the most difficult problems are solved by men who are interested in their task. If dead languages are not interesting—and they often are not—take living ones so that the exuberant life of youth be not stunted even before its bloom. President Hall advises his students to be sure to take a problem that is interesting to them because it means that one-half of the difficulties are already solved. No better advice can be given, and in its essentials it applies to high schools as well as to universities. This is not soft pedagogy but sound common sense.

President Hall thinks the cause of this increase in the number of Latin students in our high schools is external; that Latin is one of the cheap subjects to teach and that the teaching of it is more open to women than science, but holds that the chief cause is its prestige and tradition. As to Latin in the high school he says that for the American boy and girl, high school too often means Latin. That this gives at first a pleasing sense of exaltation to a higher stage of life, but after from one to three years the great majority who enter the high school drop out limp and discouraged for many reasons, largely, however, because they are not fed. He says the nature and needs of the adolescent mind demand bread and meat, while *Latin rudiments* are husks.

It is possible that we have passed the climax of this Latin craze. Since 1898 there has been a slight decrease in the percentage of students taking Latin. In 1898 it was 50.29%, in 1901–02 it was 49.52%, there being a slight decrease each year. The number that study Greek has also decreased; in 1901–02 the total number of students taking Greek was 241 less than in 1897–98, being a decided loss and not a gain as was anticipated, suggesting that the increase in the number of Latin students is probably due to other causes than a natural interest in the classics.

In Ontario, Canada, from 1895–1900 the number of high school students that studied Greek was uniformly 6%; during this time Greek was optional as to university entrance but was held equal to two modern studies. In 1900 it was made optional with German, French or science and the percentage immediately dropped to 3½. The natural interest in Latin would probably behave similarly under like conditions.

The supposition that the increase in the number that study Latin is due to a natural interest and the facts as they are found that so many students attain such poor results do not harmonize. It is true, bad results may be due to many causes, one of the most important being bad teaching, but how much may they not be due to a lack of native interest which cannot be aroused even by good teaching? It is also true that poor results and bad methods are found in other studies than the classical languages, but this is largely due to the formalistic cut-and-dried dead-language methods that have thoroughly laid hold of many of the modern subjects.

In Germany modern studies have made great progress within recent years. The *Gymnasium* will, undoubtedly, for some time to come have its usual quota of students, at least as long as the social feeling is what it is now. Though the emperor has placed the three higher schools, *Gymnasium*, *Real-gymnasium*, and *Ober-Realschule* on the same footing as far as culture value goes, it is too well known that a stroke of the pen cannot obliterate the imprint of centuries of tradition. Moreover, whereas the graduate of a *Gymnasium* is admitted to all the privileges of the university, technical as well as others, and the graduate of the *Real-gymnasium* is only excluded from the study of theology and a few minor privileges, the graduate of the *Oberrealschule* is in addition excluded from the study of medicine. Why a graduate of a *Gymnasium* should be permitted to take technical courses and a graduate from an *Ober-Realschule* should be excluded from the medical courses is difficult for the democratic American mind to understand.

The following are some comparative figures as to the attendance at the higher schools of Prussia. They are divided into two groups; those in the first group have Latin (some of them, of course, also Greek), and those in the second group have neither Latin nor Greek.

	1880	1890	1900	1902
Gymnasium	74,556	76,705	88,366	93,655
Realgymnasium	26,684	25,769	21,256	24,197
Pro-Gymnasium	3,995	5,184	6,972	5,210
Real Pro-Gymnasium	13,204	8,739	1,850	1,595
Total	118,439	116,397	118,444	124,657
Ober-Realschule	1,663	4,129	14,967	17,426
Realschule	5,093	17,360	30,062	34,206
Total	6,756	21,489	45,028	51,632

We see that in 1880 the ratio of non-classical to classical students was 1:19.4, and in 1902 it was 1:2.4. From these fig-

ures it is evident that the *Realschulen* meet a real need, and, if Lehmann is correct, many more students would attend them were it not that students from *Realschulen* cannot pass over to the *Gymnasium* without great inconvenience, and well situated parents still refuse to cut their boys off from the *Gymnasium* at so early an age (9 to 10), since the latter school is still the school for the aristocrats. Furthermore, the great increase in the number of Latin students in the *Gymnasium* and the *Realgymnasium* from 1900 to 1902 can be partly explained by the fact that in 1900, the *Gymnasium* course has been liberalized by making Greek optional below "Obersckunda," and that the *Realgymnasium* since 1901 prepares for the medical courses and since 1902 for the law courses in the university. Moreover, there is a constant change taking place, the six class schools being abandoned or made into nine class schools; this is especially true of the last two in the first group.

The predominance of the classical languages in German secondary education is largely due to class distinctions. Only the classically trained men belong to the "höheren Fakultäten" and can move in "higher" society. Paulsen says: "When a few years ago the question was current as to whether the 'Gymnasialzwang' should be repealed for medical students and the medical profession, the medical associations were asked for an expression of their opinion; they all were against admitting the graduates from the *Realschulen* to the medical course. One would be deceived, however, if one would see in this a proof that the instruction in a *Gymnasium* was considered better or more suitable; their refusal showed merely, as one could read in their verdict, directly as well as between the lines, that the *Gymnasium* was considered more aristocratic; they feared a lowering of the social rank; if the jurist would also go over to the *Realschule*, one could hear, the physicians would not have had any objections." More recently Lehmann expresses the same views. (On this point see also Schmeding, Die Klassische Bildung der Gegenwart, pp. 90 ff.)

The results obtained in Germany are not very flattering as the classicists themselves admit. Numerous voices are heard on the subject. Lehmann summarizes the situation well in these words: We fully recognize the value which humanistic culture has had for a long time for German education; yet, on the other hand, we must not deceive ourselves, for the effect it formerly had it no longer exerts That our *Gmynasium* students no longer respond in the smallest degree to the demands which the humanistic culture ideals make of them, that our students, our young officials and scholars generally show no trace of interest in, nor attachment to, the studies which they pursued during their school course, are facts which the friends

as well as the enemies of humanistic culture admit. The well-known judge, the oft quoted physician, who after his day's work picks up his Horace or his Homer, belongs to the generation before 1870; he who left the schools since that time, unless he be a philologist, usually sells his classic authors or places them in "die Rumpelkammer." And, what is still worse, they produce no lasting inward effects, they cannot because they never had a live influence. To what extent antiquity as a whole and its noblest phenomena, to what degree Horace and Homer are inwardly unknown to our present day graduates of our *Gymnasien*, is known only to him who has had opportunities for observation. Not only do they fail to get a knowledge of language form, but the content and value of humanistic culture, namely, an understanding of the very essence of antiquity, of its works of art and its great men, has fallen by the wayside.

This statement of Lehmann is a very severe indictment. It would indeed be almost calamitous if a knowledge of the Greek and Latin languages were essential toward an understanding of modern thought and modern society. Such, however, is not the case as the classicists themselves begin to admit. Dr. McCrea, for instance, goes farther than that and says that the proposition that a knowledge of the Græco-Roman civilization is educationally necessary, because without it one cannot understand the constitution of modern society, is no longer defensible. He also says that few, if any, students when entering college can give upon the basis of their study of Latin and Greek alone a fairly comprehensive, coherent, and rational account of the salient features of the ancient social organism, nor can define in an intelligent way the nature, extent, and value of the influence which Greece and Rome have respectively exerted in the advancement of civilization. This is undoubtedly true. He focuses on one argument for Latin and one only, viz., the value of Latin as a linguistic discipline. That Latin is a linguistic discipline is true also, any language is; but whether it is the best, the most fruitful linguistic discipline for a high school student who knows only his mother tongue and who will drop Latin as soon as, or before, his high school course is ended, or who does not study philology or allied subjects in his college course, is not so self-evident. Latin is a language so different from ours that it presents baffling difficulties to the young beginner. Paulsen says this difference is an obstacle which can be overcome only by an exclusive sojourn for many years in the world of antiquity. With all its borrowings English has remained true to itself and no amount of study of Latin grammar can give us the force of the living English idiom. The structure of English is English.

"The Latin may contribute its tale of bricks, yea, of goodly and polished hewn stones, to the spiritual building, but the mortar, with all that holds and binds the different parts of it together, and constitutes them into a house, is Saxon throughout" [Trench]. Moreover, our "Sprachgefühl" has developed on its own soil and refuses to accept anything that does violence to our idiom.

Some classicists hold that Latin is fundamental to a study of the science of language. But here comes the evolutionist who is not only acquainted with dead languages but also lays under contribution the living languages of mankind—of the Russian and the Chinaman, of the Hottentot and the Indian—and says, without the knowledge of these we are wofully ignorant of linguistic evolution and that the Greek, Latin, and Sanskrit aspects of English have been fearfully overdone; that Latin and Greek are incidents or accidents, not necessities of our mother-tongue. Dr. Chamberlain, furthermore, says that no language is a model for another; that "for the ordinary boy and girl the inflections and conjugations of the classical languages are simply a millstone around the neck." This is undoubtedly true of the great majority of youths to whom not "fossil grammar" but living speech is matter for education. He says further: "Latin has no more shaped the English tongue than Rome has built the Saxon heart or made the Saxon arm. English grammar is soundly Anglo-Saxon run through the sieve of a mind that never had a Latin bent."

One of the chief reasons that are advanced for giving Latin such a prominent place in the high school is that the English vocabulary is so largely derived from Latin. We have, it is true, many words from the Latin either directly or through the French. An exact estimate of the foreign element in our language is impossible. The English vocabulary is an absolutely indefinite quantity since we are coining and borrowing words every day. Not only that; it is also difficult to determine what words should be excluded from the calculation, or, in other words, what constitutes a word, as C. P. G. Scott says. To what extent should scientific and medical terms, nouns in "ness," adverbs in "ly," etc.; to what extent should non-naturalized foreign words and provincialisms be included, are questions the answer to which would vary with the individual investigator. Yet, notwithstanding these variable factors and sources of error, it may be interesting and helpful toward a general orientation to see the results that different investigators in this field have obtained.

Trench, in 1858, estimated the English vocabulary at rest as follows: Saxon origin 60%, Latin 30%, Greek 5%, all other sources 5%; with language in motion, that is, taking all the

words used by authors as they come, he thinks that 70:10 or 80:10 would fall short of expressing the ratio of Saxon to Latin words. O. F. Emerson says that according to dictionary count 25% of our language is of native origin and 75% foreign, but counting all native compounds the ratio would probably be 33⅓%, and 66⅔% respectively. The 66⅔% would include *all* foreign sources. He thinks in actual use we have less than 30% foreign words. He gives the following table of percentage of native and foreign words as used by different writers on the running page: Spenser n. 86, f. 14; Shakespeare n. 90, f. 10; Bible, three Gospels, n. 94, f. 6; Milton n. 81, f. 19; Addison n. 82, f. 18; Swift n. 75, f. 25; Pope n. 80, f. 20; Johnson n. 72, f. 28; Hume n. 73, f. 27; Gibbon n. 70, f. 30; Macaulay, Essay on Bacon, n. 75, f. 25; Tennyson n. 88, f. 12.

Anderson says that by a dictionary count we find about $\frac{5}{7}$ of our words of classical and $\frac{2}{7}$ of Germanic origin with about 2,000-3,000 words from other sources. Meikeljohn makes the ratio of Anglo-Saxon to Latin words a little less than 1:2. Hemme says that two-thirds of the English vocabulary can be traced to Latin sources, but admits that in ordinary conversation, and even in literary productions, words of Germanic origin are chiefly used.

Skeat, in his Etymological Dictionary, makes an elaborate attempt to classify the words in the English language as to the sources to which they originally belonged. It is the most exhaustive piece of work of its kind of which the writer knows. The words selected for the purpose are chiefly those given in large type in the dictionary, to the exclusion of mere derivatives of secondary importance. The English list, he says, appears short in proportion chiefly because it contains a large number of these secondary words, such as *helpful*, *happiness*, *hearty*, and the like. Of the foreign element it is the Latin only that concerns us here. The ratio of Anglo-Saxon to Latin is almost exactly 1:2, but if we add to the Anglo-Saxon the words derived from the Scandinavian, the German and the Dutch the ratio is somewhat less than 2:3. He also gives a list containing the principal Latin words productive of rather numerous derivatives and which readily admit of prefixes. Words that produce but few derivatives or that are of no special interest are excluded. There are 448 words in this list giving rise to approximately 3,000 English words. Among these 448 there are 107 that can be traced back to Indo-Germanic roots. If it is necessary to know the origin of a word in order to understand it, we must, with these 107 words, go beyond the Latin.

Greenough and Kittredge consider it of little value to count,

as to origin, the words in a dictionary or of an author. They counted the words in A in Harper's Latin Dictionary, excluding proper names, doublets, parts of verbs, and adverbs in *e* and *ter*, to see how many had been appropriated by the English language, and found that fully one-quarter had come over. They think that, roughly speaking, that percentage will hold for the entire Latin vocabulary.

Marsh says he made no attempt to determine the etymological proportion of our entire verbal stock because no dictionary contains more than two-thirds, or at most three-fourths, of the words which make up the English language. He says dictionaries are made from books and for readers of books and that they all omit a vast array of words, chiefly Saxon, which belong to the arts and to the humbler fields of life, and which have not yet found their way into literary circles. Upon examination he finds that in the total vocabulary of the Ormulum (which, in opposition to most philologists, he considers English rather than semi-Saxon) nearly 97% of the words are Anglo-Saxon; that in the vocabulary of the English Bible 60% are native; that in Shakespeare the proportion is nearly the same, while the stock of words employed in the poetical works of Milton less than 33% are Anglo-Saxon. He adds, however, that the relation between Milton's entire verbal resources and his habitual economy in the use of them is most remarkable. He says that it is true that some words of Greek and Latin origin, such as *air*, *angel*, *force*, *glory*, *grace*, *just*, *mortal*, *move*, *nature*, *part*, *peace*, etc., occur very often, but that many of the foreign words employed by him are found in but a single passage, whereas the Saxon words are many times repeated. And this, he says, is not due to particles and other small words, since Milton as well as Shakespeare, is very sparing of them.

For the purpose of determining more satisfactorily the true character of the diction of Langland and of Chaucer, Marsh counted both the different words of foreign derivation and the repetitions of them in the Passus Decimus-Quartus of Piers Ploughman and in an equal amount of the Prologue to the Canterbury Tales. This is what he found: Exclusive of quotations and of proper names the Passus Decimus-Quartus contains somewhat less than 3,200 words, 500 of which, or 16%, are of Latin or French origin, and as there are about 180 repetitions, the number of *different* foreign words is about 320, or 10%. In the first 420 verses of the Prologue to the Canterbury Tales, containing also about 3,200 words, 370 or rather less than 12% are Romance; the number of repetitions are 70, leaving 300, or rather more than 9% of *different* foreign words.

He also made an attempt to determine the proportion in which

authors employ the words at their command. The following table gives the percentages of Anglo-Saxon words as found on the running page of the different authors. The authors are arranged chronologically.

	Anglo-Sax.
Robert of Gloster, Narrative of Conquest, pp. 354 and 364,	96 per ct.
Piers Ploughman, Introduction (entire),	88 "
" Passus Decimus-Quartus (entire),	84 "
" Passus Decimus-nonus (entire),	89 "
" Creed (entire),	94 "
Chaucer, Prologue to the Canterbury Tales, first 420 verses,	88 "
" Nonnes Preestes Tale (entire),	93 "
" Squiers Tale (entire),	91 "
" Prose Tale of Meliboeus (about 3,000 words),	89 "
Sir Thomas Moore, Coronation of Richard III (7 folio pages),	84 "
Spenser's Faerie Queene, Book II, Canto 7,	86 "
John's Gospel, chap. I, IV, XVII,	96 "
Matthew's Gospel, chap. VII, XVII, XVIII,	93 "
Luke's Gospel, chap. V, XII, XXII,	92 "
Romans, chap. II, VII, XI, XV,	90 "
Shakespeare, Henry IV, pt. I, act 2,	91 "
" Othello, act V,	89 "
" Tempest, act I,	88 "
Milton, L'Allegro,	90 "
" Il Penseroso,	83 "
" Paradise Lost, Book VI,	80 "
Addison, Several numbers of The Spectator,	82 "
Pope, First Epistle and Essay on man,	80 "
Swift, Political Lying,	68 "
" John Bull, several chapters,	85 "
" Four last chapters of Queen Anne, to end of sketch of Lord Byron,	72 "
Johnson, Preface to Dictionary (entire),	72 "
Junius, Letters 12 and 23,	76 "
Hume, Hist. of England, gen. sketch of Commonweath in chap. LX,	73 "
Gibbon, Decline and Fall, vol. I, chap. VII,	70 "
Webster, Second Speech on Foote's Resolution (entire),	75 "
Irving, Stout Gentleman,	85 "
" Westminster Abbey,	77 "
Macaulay, Essay on Lord Bacon,	75 "
Channing, Essay on Milton,	75 "
Cobbett, On Indian Corn, chap. XI,	80 "

	Anglo-Sax.
Prescott, Philip the Second, B. I., c. IX,	77 per ct.
Bancroft, History, vol. VII, Battle of Bunker Hill,	78 "
Bryant, Death of the Flower,	92 "
" Thanatopsis,	84 "
Mrs. Browning, Cry of the Children,	92 "
" " Crowned and Buried,	83 "
" " Lost Bower,	77 "
Robert Browning, Blougrams Apology,	84 "
Everett, Eulogy on John Quincy Adams, last 20 pages,	76 "
Ticknor, Hist. of Spanish Literature, Period II, chap. 1,	73 "
Tennyson, The Lotus Eaters,	87 "
" In Memoriam, first 20 poems,	89 "
Ruskin, Modern Painters, II, Part 3, section 2, chap. 5,	73 "
" Elements of Drawing, first six exercises,	84 "
Longfellow, Miles Standish (entire),	87 "
Martineau, Endeavors after the Christian Life, III. Discourse,	74 "

We see from this table that since the time of Johnson and Macaulay the Anglo-Saxon element has become distinctly more prominent again, some of the modern writers having as high a percentage of native words as Langland and Chaucer. The large percentage of Latin words in Webster's speech, as Marsh says, is due to the frequent recurrence of "congress," "constitution," and other technical legal terms. In the Eulogy of Massachusetts, containing more than 200 words, 84%, and in the peroration beginning with "God grant," etc., 80% are native. These modern writers, though they know more foreign words than the writers of the preceding century, actually use fewer, proportionally, in their literary productions. Marsh thinks that this recognition of the superior force and fitness of a Saxon phraseology, for all purposes where it can be employed at all, is the most encouraging of all existing indications with respect to the tendencies of our mother-tongue, as a medium of literary effort.

Furthermore, the native English is above all the language of the home as is shown by the stock of words used by little children. I studied the vocabularies of six little children in two groups of three each. In the first three there were 1,327 different words, exclusive of inflections and proper names, of which about 14% were of Latin and a few of Greek origin. The vocabularies of the three other children containing together about 1,900 words, exclusive of proper names but not of

inflections, had about 10% Latin. This percentage is increased to about the same as with the first three by excluding all inflections. The percentage as a whole is undoubtedly above the average since all six were children of college professors. These children represent only two families, but as far as the evidence of their vocabularies goes it proves that home-born English is the language of the home; that the deep and tender emotions and feelings and relations of the family and home life can be expressed only in words that have grown up in the holiness of the hearth. Moreover, a great many, if not most, of the words of foreign origin had come in very early, some of them as early as Anglo-Saxon times, not by a pedantic literary method, but by a close living together of races, and so had become thoroughly naturalized.

That the English language has been enriched by the Latin influx is true, but it has been impoverished by it as well. Due to a Latin bias some English writers borrowed foreign words where home-born English would have done as well, and even better. Moreover, by this borrowing process English has lost the power of making compounds, a power still retained by the Germans in a high degree and which is not only useful but also expressive. Old English formed compounds from independent words quite freely. O. F. Emerson says "the word *land* was part of at least sixty-three compounds in Old English, while the word *even* 'evening' was used in twenty-six, and *life* in twenty-seven compounds, and illustrates the expressiveness of some by such words as *life-busy*, *life-care*, *life-day*, *life-fast* 'having life,' *life-ward* 'guardian of life,' *life-way*, *life-well* 'living spring,' *life-win* 'joy of life,' all of which have not come down to modern times. Besides, he says, there must have been many compounds once used, but not now known, because not found in any relic of the older literature.

Many excellent words of Anglo-Saxon stock have been crowded out by Latin words. Trench gives the following: *sooth-saw* was pushed out by "*proverb*," *sour-dough* by "leaven," *to after-think* by "repent," *medeful* by "meritorious," *fore-word* by "promise," *freshman* by "proselyte," *mooned* by "lunatic," *foretalk* by "preface," *sunstead* by "solstice," *leech-craft* by "medicine," *starconner* by "astrologer," *to eyebite* by "fascinate," *waterfright* by "hydrophobia," *wanhope* by "despair," *middler* by "mediator," and adds that on account of their simplicity and force it is to be regretted that some of these words have dropped out. It is certainly no gain to have "prudence" crowd out *forewit*, and "conscience" *inwit*.

President Hall has a list of several hundred "Lost Beauties of the English Language," from which I quote some of those that have been replaced by Latin derivatives. It is to

be regretted, also, that some of these have dropped out. Some, it is true, are still used, but their use is either very restricted or provincial. The first word is always replaced by the second : afterword=postscript; back-word=contradiction; back-stand=resistance; benothinged=annihilated, bilk=defraud; bleary=confused; bode=message; bonny=beautiful; brant=precipitate; brightsome=luminous; couth=graceful; dearworth=precious; deft=dexterous; dingthrift=prodigal; douter=extinguisher; downcome=adversity; eldfather=grandfather; eldritch=haunted; farthel=quarter; fittle=arrange; flinder=fragment; forwent=renounced; forgather=convene; glumps=sullenness; grieve=magistrate; hap=fortune; hent=apprehend; hithercome=arrival; kirtle=petticoat; louton=courtesy; longsyne=antiquity; longsome=tedious ; loveworth y=amiable; lowliness=humility; manful=virtuous; mauner=hesitate; maups=simpleton; meth=courteous; miff=temper; misdo=to err; mithe=conceal; moider=confuse; moltwater=perspiration; nantle=caress; nesh=delicate; niffer=exchange; pithful=vigorous; reuth=compassion; rapen=prepare; ream=effervescence; rogue-house=penitentiary; rowth=abundance; ruff=triumph; ruly=obedient; samely=monotonous; scale=disperse; scorse=exchange; shacker=vagabond; smerly=demure; smire=mischief; smither=fragment; snurle=influenza; sonce=prosperity; soncy=fortunate; speedful=prosperous; speer=injure; springalla=dolescent; stickle=arbitrate; stightle=confirm; stuckets=confectionery; swike=deceive; tenty=careful; tholance=toleration; thole=endure; thorp=village; thoughty=meditative; thraw=to be contrary; thrawn=ill-tempered; threesome=triple; throdden=increase; thwartover=contrary or transverse; tifty=quarrelsome; tilty=violent; tirly=rotatory; tozy=tender; unfurthersome=unfavorable; unheartsome=melancholy; wafture=signal; wanchance=misfortune; wandought=impotence; wanluck=misfortune; wanlust=indifference; wanthrift=prodigality; wantrust=suspicion; wasty=consumptive; wathe=injury; weald=forest; wedbreach=adultery; wee=diminutive; ween=imagine; welder=governor; welfulness=prosperity; well-will=benevolence; ill-willy=malevolence; werne=refuse; wersh=insipid; wevin=moment; whist=silence; whuffle=to doubt; widderly=contrary; wightly=bravely; wish-worthy=desirable; winly=pleasantly; witcraft=logic; witterly=consciously; wontless=unaccustomed; wood, or wode=furious; word-wanton=obscene; worksome=industrious; worrisome=annoying; wraith=apparition; wright=artisan; yald=vigorous; yeavy=moist; yeep=active; yeply=actively; yonderly=timid, or retiring; yond=distant or strange; yeme=attention.

Not only was Old English able to form compounds freely,

but it was rich and flexible in other ways. O. F. Emerson again says: "In the great epic poem *Beowulf*, which consists of less than 3,200 lines, there are nineteen synonyms for 'ocean,' nine for 'ship,' and eleven for 'sword.' These are all simple words. In addition, there are twenty-three compound words used for 'ocean,' twelve for 'ship,' and eighteen for 'sword'"—all true compounds and not made up of a genitive and a noun of which there are at least ten for the idea of 'ocean.'

This loss largely accounts for the fact that to-day we use Latin and Greek words more or less freely to express our thoughts, and in part, may be, for the slang so prolific with the youth who has these foreign words not yet at his command. Yet it is admitted on all hands that outside of books it is the genuine English words that have life and that the Englishman's deepest feelings are expressed in pure English. The "stilted classicisms" of Johnson and the "Gallic imitations" of Gibbon were never accepted by the people and are more and more repudiated by the writers of English. Marsh says that a better proof of the rich moral expressiveness of Anglo-Saxon than any citation of example is found in the fact, that those English dramatists and poets who have most clearly revealed the workings of the heart and thrown most light into the deep abysses of the soul, have employed a diction composed in the largest measure of words legitimately descended from the ancient mother of the English speech. In this inherited quality of moral revelation in Anglo-Saxon, he thinks, lies "in good part the secret of Shakespeare's power of bodying forth so much of man's internal being, and clothing so many of his mysterious sympathies in living forms."

Again, suppose a pupil does know the etymology of a word; suppose he does know the Latin meaning of *res* and of *publica;* does that give him the meaning of the word "republican" as used to-day? Is it not of more importance that he should know the force of the word in current use? The dynamic value is the all-important thing to which etymology must give the first place. Let the high school student study the English words in their natural habitat as they live among other words, in poetry and in prose, instead of worshipping their ancestors. The history of a word has little meaning for him until he knows the word in its present use, then and then only can derivation have value. Moreover, must the student worry through all the intricacies of Latin grammar with its innumerable rules and countless exceptions in order to know a little about the meaning the Romans attached to the word virtue? Some of the noblest interpretations of such words have been given by men and women who never wrestled once, neither with a Latin

ablative nor with a Latin subjunctive. This whole matter has a close analogy to the principles of the dynamic biologist, and we can agree with him when he says, "to present abstract relations to minds that know little about the things they relate suggests trying to feed babies with the combings of gray hair." James Russell Lowell says: "The pedigree of an adjective or substantive is of little value to ninety-nine men in a hundred, and the writers who have wielded our mother tongue with the greatest mastery have been men who knew what words had most meaning to their neighbors and acquaintances, and did not stay their pens to ask what ideas the radicals of those words may possibly have conveyed to the mind of a bricklayer going up from Padanaram to seek work on the Tower of Babel." And again, "the illuminate too often looks upon the stems and flowers of language, the highest achievements of thought and poesy, as mere handles by which to pull up the grimy tubers that lie at the base of articulate expression, shapeless knobs of speech, sacred to him as the potato to the Irishman."

A few years' study of Latin in the High School does not necessarily give one a command of an English vocabulary. As stated in an earlier part of the paper, many of the 24 Latin students in one class tried to interpret the Latin by means of the English and showed little evidence of having gained much, if any, etymological insight. Furthermore, a list of 30 words of Latin origin,[1] rather well known to fairly well read people yet not very common in ordinary conversation, was given to a seventh grade class, to a second year high school class, and to a college class in English. Some of the seventh grade class who had read considerably had a very good acquaintance with these foreign words and defined many of them very keenly, whereas many of the high school and of the college classes, most of whom had had Latin, showed a surprising ignorance. This little test indicates that it is quite possible to acquire a good English vocabulary without Latin and that a few years of Latin may almost totally fail to give help toward a mastery of one's mother tongue. That a child may get command of our words of foreign derivation without a knowledge of Latin is quite natural, since many of these words have become thoroughly incorporated in our language and are almost as English as the Teutonic words which our forefathers brought over from the continent of Europe. Most of the foreign words that were found in the children's vocabularies came in in very early times, and many of them came from Low Latin where they

[1] For this list I am indebted to Mr. W. Libby, Fellow in Clark University.

already had been tinged with Teutonic thought or had even been borrowed from northern races. Our words of foreign derivation, says Professor Matthews, have all of them been assimilated by the English language and we use them without giving a thought as to their foreign origin. We have made them ours, he says, once for all, and they are incorporated in our speech finally to be governed by all the rules of our own language.

This is not a philological but a psychological question. The high school student is not helped by spending a large portion of his time and the best part of his energy in, or in preparation for, "philological microscopy;" when a word fraught with meaning and emotion comes ringing into the soul it is the time to get a little life history of the word if you will, not only of the Latin, but of the home-bred and Indian as well, then it may be truly helpful. But the roots that the student finds by the long and wearisome Latin road are often not appreciated because of the company in which they are found. Moreover, language did not begin with the Latin, nor was it created in any other period of the past. It is being created now as well as in ages past. It is ever changing; and this living, ever-creating activity is of vital importance and not the burnt cinders of ages past. Whatever value they may have, they do not represent our language. Language as used on the platform and on the pulpit, by the common laborer, by the street-urchin, and by the press, as used by the writers and singers of this age—when intellect is at white heat, and passion in its very throw—that represents the language of to-day. Such language studied in the height of its activity gives us the true meaning of words. Whether the word was borrowed from Latin, from Greek, from Hebrew or Choctaw, it now is English and as English we study it; the etymology is a secondary matter. This idea was recognized by the makers of the Standard Dictionary when they placed the etymology after the definition.

It has been found again and again that modern languages are more easily learned by children than classical languages, because they are better adapted to their mode of thinking. Some of the students of the afore-named high school Latin class who almost completely failed in Latin had very good grades in German or French. It is not only good pedagogical principle to let the study of modern precede the study of the classical languages, but it often is of far greater value to the student since thus, if his school life ends with the high school, he at least "lays down tracks on which more of the traffic of later thought and life will go." It is true, by this plan most high school students will not know Latin, neither do they now with

all the effort put forth, but with the same effort they would know one or two modern languages so that they could use them for information and culture ever afterward.

It is not the aim in this paper to deny the value of Latin study, but rather to defend the idea that Latin take its place among, not above, other subjects of study. It need not be excluded from the high school, though it is a subject ordinarily better adapted to maturer students than high school beginners, but the feeling should not prevail that Latin has a peculiar educative power superior to other studies; nor should this study be forced upon the student, neither by the parent nor by the school, for the results show, in Germany as well as here in America, that such forcing proves disastrous. The writers quoted in this paper do not deny the value of the classics, but hold that the time of their dominance is past, that other studies may be pursued in place of Latin and Greek without detriment to culture nor to mental discipline, and without any sacrifice of sanity and serenity of thought. As is pointed out by many writers who defend the modern studies, it was well enough to study the writings of antiquity in the language of antiquity exclusively when the modern peoples had no literature, no language, no written history, and science had not developed. But all this has changed. But this is so well known it need not be repeated. Not only is classical antiquity accessible to us through masterful translations which give us a knowledge of the thought and the social conditions of the times better than any high school student gets by a study of the originals, but western civilization, since the time of the Romans, has produced a number of great men, in all the domains of human activity, whose works would make an excellent bible of that period. Their nearness to our present civilization makes their works in most cases preferable to those of antiquity as subjects of study in our secondary schools. And if science is questioned as being superficial and materialistic, it has long outgrown such suspicions; it has taxed, as we know, the massive intellects of a Darwin and a Helmholtz, and the idealistic optimism that prevails among our great lights of science is not surpassed by any of the students of the classics.

In conclusion, I wish to acknowledge my indebtedness to President G. Stanley Hall, Dr. A. F. Chamberlain, and Professor R. C. Bentley of Clark College, for assistance, and also and especially to those who so kindly helped me to the data in this paper.

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Some of the less well-known books are annotated. The others either have a title which is self-explanatory, or are so well known to the readers of this journal that they need no further comment.

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2. Emerson, O. F. A Brief History of the English Language. New York, 1896, pp. 267.
3. Greenough, J. B., and Kittredge, G. L. Words and their ways in English Speech. New York, 1901, pp. 431.
4. Hall, G. Stanley. Adolescence. Chap. 16, Vol. II, pp. 449-560. New York, 1904.
5. Hemme, A. Das lateinische Sprachmaterial im Wortschatze der deutschen, französischen, und englischen Sprache. Leipzig, 1904, pp. 1235.

This is a sort of Latin dictionary containing only such words as have produced derivatives in German, French, and English. The German definition of the word is given first, followed by the derivatives in one or all of the above-named three languages. After the dictionary proper, are given three lists of words, German, French, and English, derived from the Latin, and a fourth list containing the Italian, Spanish, and Portuguese words which serve to elucidate the etymologies of the words in the first three lists. At the end of each word in all four lists is a definite reference to the page of the dictionary proper where the etymology is treated. The English list contains approximately 5,000 words.

6. Lehmann. R. Erziehung und Erzieher. Berlin, 1901, pp. 344.

This book deals with educational ideals and principles, the home as a factor in education, the teacher, discipline, subjects of study and different kinds of German schools, etc. In chap. viii, dealing with the last named topic, he touches the problem discussed in this paper.

7. Lexis, W. Das Unterrichtswesen im Deutschen Reich. Berlin, 1904, six vols.

These six volumes, written by experts, were prepared for the St. Louis Exposition. The work treats of the present conditions of university, secondary, common school, technical, and industrial education in the different states of the German Empire. Each section has an historical introduction and contains valuablestatistics. In Vol. I, devoted to universities, we have a general discussion of the different faculties, followed by a very brief historical sketch and by statistics of each university separately.

8. Lexis, W. Die Reform des Höheren Schulwesens Preussens. Halle a. S., 1902, pp. 436.

This work is written by a number of prominent educators of Germany and edited by W. Lexis. It is a history of, and a commentary on, the new school reform movement in Germany. The privileges of the different higher (secondary) schools, the different subjects in the programmes of study, physical education and school hygiene, the training of teachers, and other allied subjects are discussed. The general attitude is in sympathy with the reform movements of 1892 and 1900.

9. Marsh, G. P. Lectures on the English Language, First Series. Revised, 1885. New York, pp. 583.
10. McCrea, Nelson G. The Latin Papers of the College Examination Board. Ed. Rev., 1904, Vol. XXVIII, pp. 28-37.
11. Paulsen, F. Geschichte des Gelehrten Unterrichts. Leipzig, 1885, pp. 811.

This is an excellent history of higher education in the schools and universities of Germany from the Middle Ages down to 1885 with special reference to the classical languages and literature. A revised edition has appeared since 1885.

12. SCHULTZE, F. Deutsche Erziehung. Leipzig, 1893, pp. 332.
This work is mainly a discussion of pedagogical principles. In Chap. xi, in which he deals with methods and subjects of instruction, he defends the idéa of letting the study of modern precede that of the classical languages, and that the former should be learned orally and not by means of grammar.

13. SCOTT, C. P. G. Number of words in English and other languages. The Princeton University Bulletin, 1902, Vol. XIII, pp. 106-111.

OBSTINACY AND OBEDIENCE.[1]

A Study in the Psychology and Pedagogy of the Will.

By Theodate L. Smith.

The standard dictionary defines obstinacy as "a stubborn adherence to a purpose, opinion, or course of action arising from conceit or the desire to have one's own way, and generally somewhat unreasonable." Unquestionably this definition covers a class of cases familiar to every one who has had much experience with human nature either in the child or the adult. From a psychological point of view, however, it is inadequate and would exclude a large mass of material dealing with inhibitory states of the will whose external effects are those ascribed to obstinacy but which have their origin in very diverse roots.[2] For the purpose of study, it has seemed best to group all the cases reported as obstinacy, willfulness and contrary mindedness under these headings, and from their analysis to seek the lines of demarcation which separate obstinacy from other states of the will. Returns collected by the questionnaire method have furnished 668 cases classified as obstinacy, 148 cases of willfulness, 341 cases of contrary mindedness and 261 cases of disobedience including an element of obstinacy, making a total of 1,418 cases, and in addition to these there were 237 cases of animal obstinacy. Many of these cases were described in minute detail and in the best of them, facts in regard to heredity, environment; physical and mental conditions were given, and the record of the child's development covered a period of several years. To sift from this material the common elements, to classify and, as far as possible, to interpret, symptoms, characteristics and incentives to the complex states which have here been grouped is the main purpose of this study; and in so far

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as it may succeed in doing this is increased the possibility of finding pedagogical principles which may have a practical application.

In attempting to tabulate the bodily reactions described as characteristic of obstinacy, it became apparent that not only were these extremely varied in different individuals but so contradictory as to indicate widely different mental conditions underlying what were described as typical cases of obstinacy. The head was described as slightly thrown back or erect with stiffened neck, and also as held down or hanging, the face as flushed and troubled, also as pale and sullen, the back as straight or slightly inclined backward or as participating in the droop of the whole figure, eyes as flashing or having a far off, blank look, muscles as rigid and tense or "limp." The teeth and lips are often mentioned as "set" and the hands either as clenched or working nervously. Actions given as characteristic during fits of obstinacy were stamping the foot, flinging the body about, tearing things, kicking, biting, scuffling feet, screaming (without tears), crying usually when the fit is approaching its end, lying down on the floor, getting limber, refusal to speak or monosyllabic answers, absolute quiet of the whole body and refusal to move or eat It will be noticed that many of these symptoms are those of anger (8), which is an accompaniment of many though not all cases of obstinacy. The anger may be either of the explosive or the long enduring, sullen type. In the cases of obstinacy entirely without anger, the only characteristic physical symptom seems to be an inhibition of muscular control so that action appears to become automatic in varying degrees. Refusals to speak or eat are undoubtedly in extreme cases, due to a physical inability to control the muscles of the throat. The following cases describe the symptoms accompanying different types of obstinacy:

A child of ten who usually did her needlework well, on a certain occasion did it badly. On being required to do it over, she became obstinate and refused to move. The command was repeated several times but instead of moving the child became very pale, set her teeth and clutched her desk. She remained in her seat during the rest of the lesson and was completely ignored. When the other children left she began to cry quietly and finally voluntarily went to her teacher and apologized but could give no reason for her behavior.

A girl of five refused to go to school and when taken there by force lay down on the floor, kicking and screaming. She refused to pay any attention to persuasion, promises or threats of punishment. As every attempt to make her stand proved a failure she was carried to another room and left unnoticed. Her crying finally ceased but she refused to do anything and sat on the floor all the morning. In the afternoon she was quiet but sulky and sat in her seat, doing very little.

A boy of five usually very ready to do as told refused to shut a door when asked because he was doing something else. His mother repeated the request but he took no notice. On being told that he must,

said he could n't. He was punished but without effect. His mother finally left the room telling him that she would come back when he had shut the door. He cried bitterly but it was half an hour before the door was very slowly closed. He was not asked to say that he was sorry but all the rest of the day he clung to his mother and was unusually demonstrative in his expressions of affection.

All readers of "Lovey Mary" will remember Tommy's spells of "getting limber" so much dreaded by those in charge of him that he was quite conscious of their effectiveness as a means of accomplishing his desires. Though not as common as rigidity of the muscles, this dead weight type of opposition was reported in a number of instances and always as accompanied by sulkiness.

In addition to the motor reactions which occur with sufficient frequency to be classified as characteristic, many children have individual motor symptoms which, to a careful observer, give warning of the approach of an obstinate fit, which can by skillful treatment frequently be avoided. One child had a way of drawling her words that served as a barometer of her mental condition to those who knew her, and with another a certain shrug of the shoulders was an index of approaching obstinacy. One teacher always anticipated trouble when she saw a peculiar smile on the face of a boy in her charge. These indications are true of animals as of children. A gentleman who owned a very intelligent and otherwise valuable horse, but which was given to occasional fits of balkiness, said that he could always foresee, and often prevent by a little humoring, an approaching fit of balkiness, by the way in which the horse held his ears and switched his tail. If the horse once balked, the case was hopeless, he never started until he was ready.

Varied as are the external symptoms reported in obstinacy, the mental states are even more varied and complex. Physical conditions, hereditary tendencies, immediate and remote environment, habit, and very nearly the whole gamut of the emotions, seem here almost inextricably mingled as factors in the production of a mental state which expresses itself in a determined persistence to do or not to do some particular thing or to act by contrary suggestion. But, however varied in their modes of manifestation, all these cases fall into either the positive or negative class, which have probably very different roots, though apparently either may be a perfectly normal development or a pathological problem.

Some cases of obstinate and persistent disobedience undoubtedly have their origin in strong instinctive desires which the child neither understands nor knows how to inhibit. The following are cases in point:

M. between the ages of three and six ran away at every opportunity, and was often found several miles from home: was punished by

being kept in bed a whole day at a time, tied in the yard, deprived of certain highly prized pleasures but without effect. Whipping also proved useless. Nor would he ever promise not to do it again: said he was sorry but *had* to go. Between the age of five or six the whole thing stopped as suddenly as it began.

The little daughter of this gentleman developed the same tendency at about the same age and he refused ever to allow her to be punished for it, though she once or twice caused very serious anxiety. As in the father's case, the impulse died out or the child became capable of controlling it between the age of five and six.

This case is of especial interest because of the element of heredity involved, but over thirty cases of persistent running away were reported at ages varying from three to twelve years. The reasons given for running away were to get to the water, which with the older boys meant going in swimming, hatred of being shut in to any defined area, and to play with other children. In the last case, two factors are involved, the gregarious instinct, and personal attraction to some individual. This deep rooted instinct for getting to the water has been studied by Bolton (4). Its strength even in young children is well illustrated by the following case:

Marita, four years old, had been forbidden to go near a little brook which ran back of the house. Nearly every day she had been forbidden to go there and punished for it, but she continued to disobey and to come back each time black with mud. One day she had been taken away from the brook several times and was finally told that she would be whipped if she went there again. She went, at the first opportunity, and was severely whipped. After being freshly dressed for the fourth time that day and warned against going to the brook, she managed to escape surveillance and went straight to the brook. She was again punished, and when her mother asked her why she persisted in being so disobedient, she answered with a sob, I *want* to mind you mama but I *can't help* going to the brook.

Another case of persistency in doing a forbidden thing, which seems to have a strong instinctive element, is the tendency to pick growing things, which in some children seems so deep rooted that it practically is impossible to inhibit it until the child reaches an age at which it can be made to understand the rights of property. There were few instances in which this tendency persisted beyond the age of four years.

In addition to the persistency which arises from racial instincts, there are individual tendencies which appear to be so deeply rooted that no amount of opposition or external restraint seems sufficient to control them. To one boy, horses, and to another, machinery were so attractive that prohibitions, threats and punishments alike proved useless whenever opportunity for indulgence of the inclination was offered.

Among the cases of obstinacy reported in connection with school discipline the negative far outnumber the positive, as would naturally be expected from prevailing conditions. The

average child adapts himself to routine with difficulty, and school often means a clash with the child's natural interests so that a fairly well developed power of control on the part of the child is requisite for his acceptance of the usual requirements. The child who enters school with little or no home training in self-control will, in most instances, present a problem for the teacher, and when this is complicated by hereditary predisposition, unfavorable nervous conditions, and frequently mal-nutrition, the difficulty and complexity are greatly increased. In American schools, teachers rarely have much knowledge of the home life and surroundings of the children they teach except what is indicated by the child himself, but from the papers received from English training schools, it would appear that this is part of an English teacher's duty, as in most of the cases definite information in regard to the child's home surroundings and training is given. From the English Board Schools many cases of refractory children are reported in which it is recognized that insufficient food or, in some cases, actual hunger, were factors affecting the child's mental condition. Quite as clearly emphasized were the effects of pampering the appetite or over-indulgence in sweets or too rich food. Disorders of the stomach and liver are frequently mentioned as a predisposing influence in children who have a tendency to obstinacy and sometimes as the direct cause of a temporary attack of contrariness in children who are ordinarily sweet tempered and well trained. Other physical conditions which were mentioned as furnishing a soil on which obstinacy and contrariness thrive were eye strain, ear trouble, anæmia and fatigue (14). Mentally deficient children were in a number of instances reported as exhibiting extreme forms of obstinacy and the only cases considered as hopless. In about one-fourth of the whole number of cases heredity or innate disposition was stated and reasons for inferring hereditary influence were given in many more.

The following extracts are typical of this class of cases :

F., 23. Has always had an instinct of stubbornness. It is aroused by disappointment or opposition. The state of the weather often induces it without other cause.

F., 10. A child of peculiar temperament and subject to obstinate fits. Her face became white and set but she was very quiet. Neither corporal punishment nor kindly reasoning had any effect. The case was finally referred to a physician.

M., 7. Had fits of unreasoning obstinacy in school, the outbreaks were frequent and violent and he really seemed unable to help them. After such attacks he was usually a shining light in his class. His sister had similar attacks and the father is reported as having a very contrary disposition.

M., 9. A singularly obedient and affectionate child, rather slow in his motions and dislikes to be hurried. Rather slow mentally but

intelligent and has a good memory. But he occasionally makes up his mind that he won't do a thing. He is perfectly pleasant about it but no one has ever succeeded in persuading or forcing him to do the thing he has made up his mind not to do. He apparently makes no resistance but carries his points somewhat after the fashion of the Japanese *jui jutsu*.

Among the most frequent occasions of a fit of obstinacy is a feeling of injustice. This was reported in a large number of the observed cases and emphasized in the reminiscent returns:

A boy of ten was unjustly accused of having mislaid a certain key and his word questioned when he said that he had not. He went to his room and remained there all day, refusing to come to meals or to answer except in monosyllables. The key was found where another person had put it and an apology offered to the boy but he refused to be appeased. The next morning he came down as usual and acted somewhat ashamed.

F., 7. A bright child with a keen sense of honor. On one occasion her work was careless and in reproving her, her teacher implied that she had taken advantage of previous praise. Her muscles stiffened and she remained like a statue for the rest of the afternoon, refusing to speak or move. Was forcibly moved but remained just as she was placed until after school. Kindness finally overcame her resentment.

F., 19. As a child, was subject to fits of obstinacy, any hint of injustice invariably producing them. Even at the present time if any hint of injustice is accorded her, becomes stubborn and refuses to hear any explanation: can neither explain nor help this feeling.

Sometimes a chronic state of obstinacy may be established in relation to a certain individual, usually because the subject is thwarted or misunderstood, while the mental attitude towards others is quite normal, or in sensitive natures that feeling of injustice and resentment which is at its root may be extended to the world in general and produce a morbid feeling of opposition to the whole environment. Some of the reminiscent returns so well describe the mental state during a fit of obstinacy that one or two are quoted in full.

F., 23. As a child occasional fits of obstinacy used to assail me. When about eight years of age I was required to do something much against my will. I refused to do so, and walked out into the garden and sat upon a block of wood in a piercingly cold wind. First I was commanded to go in and do as I was told, but I was mute. Then they tried persuasion, and to that I was impervious. Finally they left me entirely alone for two or three hours. All this time I felt a much injured mortal, and every one else appeared hard and unsympathetic. I was speechless, my teeth were clenched, my face was pale. It was cold, but I did not care. It was past dinner time, but I could not have eaten had I tried. My head ached, and all kinds of thoughts flew through my mind with marvellous rapidity. After an hour's loneliness I began to wish to give way but I could not. Then after a long time mother came to me and spoke gently as if nothing had occurred and I at once was all contrition. These fits of obstinacy always left me very tired and exhausted, and I always had a very bad headache, and felt generally very low spirited for a day or two.

F., Adult. (At twelve years). One of the most miserable recollec-

tions of my life is of a fit of obstinacy whose original cause was so insignificant that I have forgotten it. My mother had told me to do something which, for some reason, I felt disinclined to do. My father overhearing my refusal sent me to my room until I was ready to do as asked and to apologize for rudeness and disobedience. I worked myself into a perfect frenzy of injured feeling. I hoped that I would be ill and die so that my parents would regret their unjust treatment. My parents were unkind and I was the most miserable being upon earth. As the day wore on, I began to wonder how long my father would keep me up stairs, for I had not the slightest idea of giving in and neither had I the slightest thought of disobeying his injunction to stay in my room. My dinner was sent up to me but I could not eat. I had cried until I was faint and nauseated. It was an interminably long day and when twilight came I was very lonely and miserable. I wanted my father and mother. I wished things had n't happened but still had no thought of ending the situation. My universe seemed blocked, but still the idea that the end of the matter lay with me did not come. The situation seemed impossible and yet had the awfulness of fate about it. Then the hurt look on my mother's face came before me. I began to feel sorry. But to go down stairs and say that I was sorry because I had been told that I must. that was impossible. Then it began to seem as if I could n't bear it any longer. I *was* sorry but I could n't say so. Just then my mother came in and put her arms about me and in an instant my trouble was ended. It would have seemed as impossible not to say that I was sorry as it had seemed impossible to say it the moment before.

In both of the cases just quoted it is observable that a long time elapses before the idea of doing the thing required comes before the mind at all. Though both begin with a refusal to do something the starting point seems to be lost sight of and swallowed up in a feeling of injury which paralyzes the will. The mental state is predominantly emotional. Anger, hurt pride, grief, loneliness, feelings of injury and injustice so completely dominate the mind that there is no room for the entrance of other ideas. In other cases the whole energy of the will seems concentrated in an "I won't."

M., 10. A case of pure obstinacy without anger. The child was not usually obstinate. Absolutely refused to move in line (afterwards said a boy kicked him but the original cause was forgotten). Kindness, firmness, shaming and sympathy all failed. Janitor carried him up stairs. Obstinacy continued 70 minutes. Finally broken by a request in a quick tone to do something for the principal. A series of such requests seemed to release his will power. Said he was sorry and would not do so again.

In the two reminiscent cases the crises is almost wholly of an emotional character while in the case just quoted it is brought about by a sudden change of ideas. We have here two distinct types, in one of which the obstinacy appears to be the result of a temporary paralysis of the will due to an inability to get a certain idea before the mind and in the other of a cramp of the will due to the presence of a fixed idea of refusal even though the original cause may have faded into the background of consciousness.

In many instances a fit of obstinacy is simply a rebellion against a *must*, the particular thing required being a matter of indifference. This may be due to a failure or refusal on the part of the child to recognize the authority of the person issuing the mandate or to an undisciplined assertion to the right to freedom of action which is instinctive in every normal child. Since the idea that liberty exists only through law is not developed except through experience, these rebellious attitudes of early childhood seem to be perfectly normal for that age, though their continuance in later life may be regarded as due to a lack of discipline or as a case of arrested development. The following case is so typical of these early struggles of childhood that it is quoted in full.

1. F., 24. "Baby's" nurse being busy, her aunt took the child to her room, while she dressed for church. Baby wandered round until she spied a bag filled with buttons of various sorts and sizes. "Baby wants the buttons,—mother's buttons," announced the little one. They were given to her, and Baby sat on the floor, and turned them all out with great glee. She piled them up in little heaps, and then with a sweep of her hand sent them flying all over the floor.

In a minute or two she got tired of the buttons and began again, "Baby wants the tic-tic."

Baby must pick up the buttons," said her aunt in a firm voice. "No, said the child, "Baby won't pick up the buttons." Baby had risen to her feet, all smiles, and began, "Baby does not want the buttons any more,—take baby out."

"But the buttons, dear, what will mother say? see they are all over the floor, put them in, quick."

"Baby placed her hands behind her back, and pouted her lips. "No, Baby won't put them in."

"Then you are a naughty child, and I shall put you in a room all by yourself," said her aunt.

And without another word she caught up the child and carried her into the next room, shut the door leaving her on the floor by herself. Of course Baby cried lustily, at such unheard of behavior.

Her aunt completed her dressing, and then went for Baby. Baby will pick up the buttons now said her aunt, placing the child on the floor beside them. But Baby only sobbed piteously, and absolutely refused to do anything of the kind. In despair, her aunt took off her gloves, and carried Baby back again to her room. Three times this programme was gone through, and at last Baby worn out with the unequal struggle, stooped down and consented to pick up the buttons. At last they were all in *but four*. Baby stood up, "All in," she exclaimed. "No, they are not all in, put in the others, dear," said her aunt coaxingly.

"All in," said Baby once more, in a decided tone, not attempting to pick them up. Poor Baby. her lips were trembling, and a stifled sob burst from her shaking little frame.

"All in," she repeated, "Baby wants to kiss you," said the child in a coaxing tone.

"Well, put in the rest, darling, and then you shall."

Dead silence,—there lay those four wretched buttons, and there stood Baby, regarding them fixedly.

Her aunt turned her back, and walked to the window. In a moment Baby picked them up. "All in, all in," she sobbed—and they were.

A large number of cases were reported as obstinacy which involve a very different problem of the will from any of the preceding. The following are examples:

A child of five, on first being sent to school, refused to stand up or take any part in the exercises when called upon to do so. This lasted over a month (child delicate, nervous, and very shy).

Another child, still younger, refused to answer to her name at roll call for six weeks after entering school. One morning a teacher with a very gentle voice called the roll and the child answered. The first teacher spoke in a quick, energetic tone.

A boy of eight refused to take some nauseating medicine, cried but did not show temper. Neither coaxing nor punishment availed to make him take it.

Numerous cases are also reported in which children have persistently refused to eat some article of food which was especially disliked. In all of the above instances, a strong effort of the will is required to overcome either timidity or a strong physical repugnance, and a failure to do this is certainly not obstinacy in any usually accepted sense of the term, though both may be due to a weakness of the will and have the same objective manifestations.

Another class of cases reported as extreme types of obstinacy are those in which the child has some unrevealed reason which furnishes a strong motive for persistency in a certain line of conduct. Often children cannot explain this because they lack the power of expression.

A little girl of five years refused one night to say her prayers and could not be persuaded to do so. The refusal was continued on subsequent nights, and after exhausting her ingenuity in trying to overcome it the mother wisely concluded to let the matter alone. After three months the child suddenly kneeled one night and said her prayers but the mother did not discover the explanation of the child's refusal until months later. She had in some way gotten the idea that by repeating the words "If I should die before I wake," she was incurring the danger of dying in her sleep.

A case of similar refusal on the part of a child a year younger was reported from England but the explanation had not been discovered. It would be interesting to know if the similarity was continued in the child's reason for refusal.

F., 22. Remembers a fit of obstinacy when she was between four and five years old. Refused to say the letter *d*, the reason, as she remembers it, being that it stood for dunce and she somehow thought that this reflected upon her. Was sent to a corner by her father but would not speak and was finally sent to bed. Made up her mind that conflict with authority was too much effort and mentally surrendered. Was surprised some years later to hear her father tell the story and say that she was victorious.

Cases of this class are for the most part recorded as reminiscences, but it is probable that at least a part of the observed cases of unexplained obstinacy in children who do not ordinarily resist lawful authority, are to be accounted for in this way.

Several cases of conscience are also reported where a child has suffered severe punishment rather than break a promise, the case appearing to adults as unexplained obstinacy. In this group also should perhaps be included a few cases of secret childish vows, though these have a touch of morbidity about them so that they might equally well be classed as pathological.

Contrariness. Very closely allied to obstinacy is that form of perverse will which is designated as contrariness and which may be either temporary or chronic. The latter is, perhaps, always more or less pathological, and according to the majority of reports received, physical conditions play a large rôle in the former. Stomach and intestinal disorders, eye strain, malnutrition, ear trouble and nervous disorders are most frequently mentioned in this connection. Several papers describe chronic contrariness as existing in connection with epilepsy and greatly increased just before an attack. Clouston (6) also notes this among the characteristic symptoms of epilepsy. The early years of adolescence are often attended by spells of contrariness and these, for the most part, seem to be simply a part of the general ferment and readjustment which belong to that age and are a passing symptom. This is also true of those cases which develop at the climacteric. But not all cases of contrariness are to be ascribed either to heredity or physical conditions. Numerous cases of perfectly healthy children were reported as typical cases of contrariness. When any cause for this was assigned, it was invariably "bad training." The explanations also show that a definite kind of bad training is associated with contrariness in a healthy child. While it is quite true that some children are born contrary and, at least during their early years, have outbreaks under the wisest system of training, it also appears to be true that a course of indulgence alternating with unreasoning severity, when the child becomes troublesome, is apt to develop contrariness in children who under a just and kindly system of government exhibit no special perversity of will. In some of the adults described as chronic objectors, it is claimed that early circumstances had much to do in developing this disposition though there is usually also a hint of hereditary tendency. The following examples illustrate the different forms of contrariness.

Children. M., 5. Would do things he disliked to be contrary. Will even refuse candy if asked to have some, but if any one suggests that he is not to have any, immediately wants it.

M., 4. Was usually cross early in the morning, and when greeted by "good morning" would reply "t is n't good morning." This seemed due to a physical condition, for after breakfast he was agreeable for the remainder of the day.

M., 4. Usually sweet tempered but about once a month has spells when he is contrary and irritable.

F., 2½. Extremely contrary when coming down with measles.

F., 3. Extremely contrary until about three years old. Was very delicate. Improvement in health was accompanied by a disappearance of the contrariness.

F., 2½. Has spells of extreme contrariness. Is allowed to eat what she pleases and her stomach is frequently out of order.

M., 3. Whatever is suggested to him says "no" in a whining way. Is perfectly healthy. Alternately indulged and spanked.

M., 3. Is contrary for the sake of teasing. Showed this disposition before he could talk.

M., 6. Has been contrary from babyhood. The easiest way to get him to do anything is to suggest the opposite. Inherits the disposition. His health is apparently good.

F., 7. Has been subject to contrary spells all her life. During the last year these have greatly increased and symptoms of epilepsy have developed.

Adults. M., 45. Usually pleasant, but very contrary when business affairs are troubling him.

M., 40. Always says "no" to his children's requests or gives only a grudging assent. (Heredity.)

F., 42. For two years was very contrary minded. If her little daughter wished to do anything, she invariably told her not to do it. In conversing with people always took the opposite side. The cause was nervous prostration and the contrariness disappeared with the disease.

F., 28. Epileptic. For a day or two before an attack is very difficult to get along with. Objects to everything that is done for her.

F., 26. Has spells of contrariness when she is nervous or tired or has been confined in doors for a long time.

M., 60. Always on the off side and ready for a dispute.

F., 21. I often feel a tendency to do the opposite of what is suggested, even though the suggestion is a friendly one. I have a friend much older than I of whom I am very fond, but she seems unconsciously to bring out all the contrariness in me, and she once laughingly remarked to me that I brought it all out in her. If she suggest something I have a wild desire to contradict her.

M. A man of about middle age. He is a chronic objector—contradicting whenever possible, and very often when no objection can be made. Picks flaws and so magnifies them that the original point is quite lost. Is ignorant, but always has an opinion on every subject and will contradict a specialist in any line.

Young man of Dutch birth. Mother a meek submissive woman; father noted for unflinching steadiness of purpose and total disregard for the opinions of others. His boy-life was embittered by attempts to free his will.

F., 40. Has periodic contrary spells which she finds it very difficult to control. At such times feels an impulse to object to anything suggested no matter what it is. Feels that the best thing is to stay alone until she gets over it.

M., Adult. Had little sympathy either at home or school during his boyhood. The home atmosphere was one of contention and the children alternately indulged and treated with severity. When he left school and went to work, he was somewhat isolated from those of his own station. Became a rather morose man, with a tendency to take the off side on every occasion. He married a woman of warm positive influences and has very greatly improved. She is always careful not to directly cross his wishes but laughs his "no" into "yes" or coaxes him by indirect influences into another frame of mind.

The Obstinacy of Old Age. The obstinacy and contrariness which frequently characterizes old age, and of which 173 cases were described, seems to be due, in large measure, to force of habit (7). Like the muscles, the mind seems to lose its flexibility with advancing years, and habitual ways of thinking or of doing things become so automatic that change is difficult or impossible. Fixed ways of doing particular things, habits of dress, preferences for certain kinds of food and adherence to opinions, simply because they have been held until they have become a part of the mental life, are characteristics that are too well known to need description. Along with, or as a part of, this fixation of habits of body and mind is usually developed a dislike of change simply as change rather than because of any quality inherent in the thing which may be in question. Another element likewise often enters into the obstinacy or contrariness of old age. The idea of advancing feebleness and a dread lest one's right of decision should be called in question often induce what appears to be an unreasonable contrariness in the old, and the greater the consciousness of failing powers, the more keenly is this felt. Old people are often extremely sensitive in regard to anything which seems in the slightest degree to threaten their independence. As the memory begins to fail early associations are recalled much more clearly than later ones and assume relatively greater importance. Hence the clinging to old familiar places and customs which seem inconvenient and uncomfortable to others but which have a very real value to the old because they contribute to a feeling of the integrity of personality which is diminished by new surroundings and unfamiliar ways.

An old lady had a small clock in her bedroom which she would allow no one else to wind even when she was ill. Also refused to take certain nourishment ordered to keep up her strength.

M., 80. Is fond of relating events which have happened to him and through failure of memory often makes mistakes. If corrected, will always insist that he is right. Will not admit it if he falls to sleep when some one is reading to him.

An old lady is noted for her perversity. One evening she said she was tired and guessed she would go to bed. As she made no move, fifteen minutes later her daughter gently suggested the same thing. She was instantly irritated and said she guessed she knew enough to go to bed when it was time.

An old lady who was ill was ordered by the doctor to have a fire in her room. She refused, saying that she never had had one and was n't going to begin now. The nurse obeyed the doctor's orders, but as soon as the doctor was gone, the old lady made her put it out threatening to do it herself if she did not.

Two old ladies who keep school are very antiquated in their methods of teaching. They acknowledge the efficacy of more modern methods but do not change. Say that they have always done that way.

M., 80. Persists in wearing shabby clothes, though he has plenty of good ones. Brings neckties, which are fit only for the rag bag, to his daughter and insists on having them mended.

F., 75. Will not allow her nieces, who do their own sewing, to buy a sewing machine: says it is laziness to want one. *She* never had one.

F., 85. For the past twelve or fourteen years has promised her daughter to move into a more convenient house but when it comes to the point always refuses to do it, saying I can't find a house like my own.

M., 82. Always persists in wearing his hat in the house in spite of remonstrance.

Institutional Obstinacy. In studying the returns, attention was attracted to the frequency with which cases of obstinate rebellion occurred under extremely strict or mechanical rule, whether in home or school discipline, and this led to a further investigation of such conditions. Information has been sought from superintendents and others connected with institutional work to find out, if possible, how far this tendency is general and if it affects all or only a part of those brought under a system of fixed rules. The problem is, of necessity, a complex one, since many of those who come under institutional discipline are of degenerate stock and the condition of their nervous systems is such as to make rebellion against rule and uniformity almost inevitable. The question "Do you think institutional life has a tendency to develop obstinacy?" has received a variety of answers. Some have given an unequivocal "yes, in all children," others have qualified the answer by saying that an original disposition to obstinacy was increased by institutional life, and individual cases have been reported in which obstinacy has greatly diminished or disappeared after entrance to an institution. There proves, however, to be no fundamental disagreement in these answers, since the beneficial effects were invariably found to be due to *individual* treatment and influences. There is, moreover, a marked correlation between the degree of strictness and the frequency of obstinacy. In two reformatories for girls, a greater amount of freedom has resulted in a betterment of discipline and a decrease of obstinacy. The late Mrs. Johnson, former superintendent of the Sherborn prison, fully recognized the psychological effect upon the prisoners of living under rigid rule, and said that it was not an uncommon thing for prisoners, after months of good behavior to have a sudden outbreak, refuse obedience to the matrons, and lose the good conduct badges and privileges which they had gained by slow degrees. It occasionally happened that she was able to foresee and prevent such an attack by her personal influence with the prisoners. There seems, on the whole, strong evidence for the view that institutional life, in so far as it is rigid and mechanical in system, has a tendency to develop obstinacy in either children or adults and that it is only in so far as institutions are deinstitutionalized and the individual rather than the institution considered, that the best results in moral training are attained.

Animal Obstinacy. In the questionnaire returns 237 cases of animal balkiness were described with varying degrees of detail. These include horses, donkeys, mules, cats, dogs, pigs, cows, oxen, birds and a few of the smaller wild animals which have been tamed and partially domesticated. The training of an Angora kitten furnished material for a continuous individual study. An opportunity also occurred during the summer for the study of several balky farm animals.

As in the case of human obstinacy, the conditions underlying animal balkiness were found to be varied and numerous. The most important factors traced were fear, instinctive desires, against the interference with which balkiness is a protest, that which in the animal corresponds to a sense of justice in human beings, fatigue, physical repugnance, habit, hereditary influences and physical disorders. Habit here works in two ways. Interference with firmly established habit may produce balkiness, and an animal which has once balked is more liable to do so again whatever the original cause may have been. Animals, like human beings, are also often sensitive to particular states of the weather and balkiness is more liable to occur when the weather exerts an unfavorable influence upon the nervous system. Bostock (5), the well known animal trainer, has observed this and says "Damp, muggy, weather makes lions seemingly depressed, and in this state they are doubly unwilling to do anything they do not feel inclined to do." Some of the other facts which he states have so direct a bearing upon the problems involved in obstinacy that they are here quoted. Of animal characteristics he says, the tiger is feared for a tenacity of purpose which when once aroused is almost unconquerable.—Lions have no affection; they become used to, and tolerant of, their trainers and their obedience and docility is partly, if not wholly, due to ignorance and to the dread of anything they do not comprehend.—An animal learns by association. Though it is a common belief, fear is not the reason for obedience to his trainer's commands. Habit and ignorance are what cause the animal to become an apt pupil in the hands of his trainer. One of the greatest factors in training is to secure prompt obedience from the animals, not only at the beginning but always.—I have seen trainers spend hours and sometimes a whole day insisting on an animal's doing some little thing; it may not be used in the performance at all, but it is a matter of obedience and it must be insisted upon no matter at what trouble or cost. Once let an animal off his performance and it generally means that he expects and insists on giving no more exhibitions at all. One more paragraph of interest in this connection is the peculiar change in the animal's disposition called "going bad." "The thing most dreaded among animal trainers is the change

of temperament on the part of the animal known in menagerie parlance as going bad. Lions are likely to go bad about the tenth year of life, tigers two or three years earlier. The going bad may come in the nature of a sudden attack or it may develop slowly and be counteracted if taken in time. Sometimes this bad temper will last but a short time and again it will become the permanent condition of the animal. He is then useless for performances and never recovers. Elephants also go bad, but there seems to be no special age for this, but in the majority of cases these animals become dangerous after a certain time in captivity." In this characteristic of elephants there is strong suggestion of a parallelism with institutional obstinacy. These few paragraphs indicate something of the problems presented to the animal trainer. To be successful he must understand both the family and individual characteristics of the animal he is to train. He must carefully watch the physical conditions, since it is unwise to require any performance of an animal even slightly indisposed and he must, though avoiding occasions for balkiness, always insist upon obedience, but not through fear. In the training of domestic animals the problems are similar, though the scale of intelligence is higher and many of them are capable of a high degree of affection which, according to Bostock, the larger wild animals do not possess. In training the Angora kitten above mentioned, balkiness was soon encountered in both the positive and negative form. The kitten was intelligent and readily learned to kiss, to sit up and beg, jump through the hands or over a cane and do a trapeze act at command. She seemed usually to enjoy her lessons and not infrequently did her little tricks without command. She also soon learned that climbing up lace curtains and sharpening her claws on furniture was not permitted and would stop when spoken to in a certain tone. She was, however, extremely persistent in the gratification of these instincts when not watched. She soon learned to associate the disagreeable experience of drops of cold water descending upon her nose with this gratification and after the association was well established, simply leaving a glass of water near the forbidden objects was usually sufficient to prevent the action. If it was forgotten the instinct was gratified. No attempt was made to inhibit the instinct of sharpening the claws but only to restrict it to a certain place. The force of habit came into play here and the special place became a complete protection to other articles of furniture. The first distinct instance of balkiness occurred when the kitten was about eight weeks old, when she refused to kiss a certain gentleman who had picked her up. It took twenty-three minutes to secure obedience. She was not hurt in any way but firmly held and the order repeated from time

to time until it was finally obeyed after a protesting mew. As soon as released she ran and hid. In this case the cause of the balkiness was probably a physical repugnance to the odor of tobacco to which cats usually show an intense dislike. Too long continuance of a lesson was also likely to produce balkiness which could not be attributed to fatigue of the muscles used, as frequently, in the case of jumping, the same form of activity was continued after the cessation of the lesson.

Interference of associations also produced an inhibiting effect. The worst time for giving a begging lesson was when the kitten was really hungry, whether or not food was in sight. The natural movements of standing up and reaching were made, but it was almost impossible to secure the artificial position with the paws dropped. It was also much more difficult to secure obedience if the lesson was given in an unaccustomed place. On the negative side or balkiness persistent refusals to obey occurred from fatigue of attention, physical repugnance, interference of associations and interference with habit. Any attempt to change the details of a required act was usually met with a refusal to do it at all. On the positive side persisting in any particular course of action was due to strong instinctive desires.

Animal obstinacy is less frequently associated with anger than in human beings though some cases are reported of dogs which show fight if forced beyond a certain point, and there is always danger in the case of wild animals. The physical symptoms of both anger and obstinacy are similar, rigidity of muscles being the most marked expression of obstinacy.

Pathological Cases. It is as difficult to draw any fixed line between pathological and normal cases of obstinacy as between sanity and insanity though some of the cases reported are undoubtedly on the pathological side.

F., 5½. Refused to say please for a glass of water. Was told that she must say it before she could have a drink. The child was left with a glass of water in sight and told that she could have it as soon as she said please. Refused until her health was in danger. A physician was called and advised keeping her quiet and leaving her entirely alone. She finally yielded.

Two little girls who were great friends entered into a playful contest as to which should reach a much desired seat at the beginning of term. For a day or two they avoided each other though still in a half playful spirit, though a desire not to give in was now awakened. The feeling grew until the matter became serious and a word could no longer break the spell. They grew apart and had nothing to do with each other though in the same class. This continued four years, until a third girl, not knowing how matters stood, became attached to both. A sudden illness of this girl compelled them to speak to each other, and the spell was broken. They became friends again but neither ever tried to explain the strange separation.

In some of these cases there seems to be a cramp or paralysis

of the will so that it refuses to act even though the desire to act may be present. Miss Wilkins (15) has given an excellent description of this type of diseased will in her story of the man who for years sat on the church steps during service, refusing to enter because of a church quarrel, knowing that he made himself ridiculous yet unable to give in and impelled by a New England conscience to go as far as the threshold. This form of diseased will differs from the typical cases of abulia described by Ribot (11) in being restricted to a special act, while in abulia the inability to act may occur in regard to any situation. The gradual fixation in a course of action never deliberately and consciously adopted which is illustrated in one of the above cases has been vividly described by Hawthorne (9) in the case of the man who one day stayed away from home in a half jesting mood to see how it would affect his wife. Each day he meant to go home, but lived for years in sight of his wife and home, avoiding recognition and bound by a spell which he daily became more incapable of breaking. Yet a careful study of these extreme cases of diseased will leads to the conclusion that they are but exaggerations of those which are met with daily, and that obstinacy, in its nature, is due to weakness and not, as is often popularly supposed, to strength of will. Since the definition at the beginning of this paper was rejected as inadequate, it is necessary at this point to offer at least a tentative definition which will serve to draw some lines of demarcation in the material dealing with states of the will which has here been collected. The points which have appeared essential characteristics of obstinacy, apart from the great complexity of mental states with which it is associated, are persistency, egoistic assertion, and revolt against authority in some form either personal or impersonal. If obstinacy be defined as a persistent egoistic revolt against authority, in the wider sense of the term, it limits it to a definite characteristic attitude of the will, without, however, any attempt to limit the emotional and intellectual factors which may accompany or induce it, and which investigation has shown to be so varied and so complex. Under this definition it is evident that some of material in the preceding sections must be classified otherwise than as obstinacy.

That obstinacy is due to weakness rather than strength of will is indicated not only by the fundamental fact that it is characterized by a loss of muscular control either in the form of rigidity or partial temporary paralysis but by the numerous reminiscent returns in which the writers acknowledge that they have wished to yield but could not, by the evident relief shown by some children when they have been helped to overcome the apparent obstruction of the will, by the frequency of attacks

of obstinacy in young children whose wills are normally weak, by the fact that it is a frequent characteristic of the feeble minded (2), by its frequent association with physical ailments or hereditary degeneracy and by the study of pathological cases. From this point of view occasional attacks of obstinacy during the early years of childhood may be considered as perfectly normal. All healthy children are egoistic, and in finding the limitations of their own personalities they naturally come into conflict with authority. Their wills are largely impulsive and emotional and their instinctive desires strong; and moral, like bodily control and independence, is learned at the cost of some pain and collision. The frequency and duration of these struggles against authority depend both upon the natural disposition and the training which the child receives. For children in whom the feeling of personality is especially strong, the acceptance of law is harder, but self control, when once acquired, is proportionately more stable. It must be recognized, also, that some children are born with a tendency to balk at restraint and that such children need special care and help in gaining self-control. The returns show that such a tendency may exist in either strong or weak-willed children, and that the method of treatment to which the child is subjected has much to do with its development or control.

Since obstinacy is so frequently, though not always, associated with disobedience, in discussing the treatment of obstinacy, the question of the training of children in obedience seemed a necessary correlate and answers to the following questions were collected :

"How have the most obedient children you have ever known been trained? Describe concrete cases, giving other characteristics of the child; whether timid or courageous; truthful or untruthful; affectionate or the reverse; weak or strong willed.

"What is your mature estimate of the value of training in obedience on your own character? How were you trained, strictly or otherwise?"

To the first question 113 answers were received, chiefly from English sources, nearly all of the American papers omitting the question. The second received 366 answers. The word obedience received a variety of interpretations, from mere outward conformity to authority with inward rebellion and from motives of fear or policy, up to a complete harmony of the inner disposition, with external requirement recognized as embodying a moral principle. This last and highest form is, of course, possible only for older children. Very little children obey chiefly through habit and association, and for them the conception of law is limited to parental approval or disapproval. Miss Shinn (12) writes of her little niece at the age

of one year: "She had not an atom of moral sense nor the least capacity of penitence or pity." But though the moral sense is undeveloped, the raw material of morality, to use Sully's phrase, is present and training may begin long before there is any intelligent response on the part of the child. Preyer (10) thinks that such training cannot be begun too early an age, and thus summarizes the results of his observations. "Exercises in being obedient cannot begin too early, and I have, during an almost daily observation of six years, discovered no harm from an early, consistent guiding of the germinating will, provided only this guiding be done with the greatest mildness and justice, as if the infant already had an insight into the benefits of obedience. By assuming insight in the child, insight will be earlier awakened than by training; and by giving a true and reasonable ground for every command, as soon as the understanding begins, and by avoiding all groundless prohibitions, obedience is made decidedly more easy. Thus, through cultivation of ideas of a higher order, the will may be directed even in the second year and character thereby be formed; but only through an inexorable consistency, which allows no exception to a prohibition, is it possible to maintain the form once impressed upon the character." Preyer's view is very fully corroborated by the questionnaire material as the following extracts, condensed from more detailed descriptions, show.

F., 21. The most obedient children I ever knew were trained to obedience from earliest infancy. Their mother always said that she taught them to obey as soon as they knew anything at all. These children were courageous, truthful, very affectionate and possessed of very strong wills and yet are always to submit to any one in authority. The eldest girl is I think influenced largely by her affectionate nature. Opposition from her friends is always a distress to her but does not turn her from what she believes to be right now that she is older.

F., 23. The most obedient child I know is a boy of eight, an only child, firmly but lovingly trained, told not to do things because they were wrong and would grieve his parents.

F., 27. The most obedient children I have known were trained to obedience from the first hour of their existence. They are strong willed and courageous. Their obedience is cheerful and they have always felt sure of justice and sympathy. The most disobedient child I know is strong willed and courageous but untruthful. His mother has not insisted on obedience when she has told him to do something and has not always kept her word to him.

F., 24. At a small country village where I have stayed every summer for some years, lived a very large family, mostly boys. I have never seen a more obedient family in my life. At the least intimation of an order given by their mother, off they ran to obey it. It may seem peculiar, but the mother of the family was not at all strict with the children. They seemed to do all they wished provided they obeyed orders. These children living in the country, were very courageous; due partly, perhaps, to their up-bringing. They were afraid of hardly any one, and while out at play did the most daring things.

They were all extremely truthful. I noticed that some of them were very affectionate to strangers, but some were exceedingly the reverse. Among the children there existed a very strong affection. They were all very strong willed.

F., 24. The most obedient children that I know are my sister's six children. From their earliest days they are kept quiet and are trained to regular habits of sleeping, nursing, etc. Their mother tries to avoid things which may cause rebellion, but if the rebellion comes, the child must yield.

F., 19. The most obedient children I knew belonged to a family who lived near us. The mother was dead, and the father himself managed all affairs. He was an old soldier, and a very firm disciplinarian. Consequently, his children were trained in habits of the most perfect obedience, and were accustomed to obey their father promptly without any questioning.

To a casual outsider this would appear very well, but on the children the effect was not good.

Before their father, and indeed before any one placed in authority over them, they were timid and scared, and have been driven sometimes to telling untruths in order to escape their parent's wrath.

In school these children were not generally liked, they were accused of being deceitful and underhanded, and, as far as I could see, this accusation was not far out.

This last case is typical of results where outward conformity, due to fear of punishment, seems to have been the chief factor in training.

In reviewing the 113 cases of obedient children described, a few fundamental principles stand out clearly and these are still further emphasized in the reminiscent returns. Too many rules and too strict discipline are not conducive to true obedience, if this is considered as an inward recognition of, and not mere outward conformity to, law and authority, regardless of motive. For this result a certain amount of freedom is necessary. A child, all the details of whose existence are under rule, has no opportunity for the development of self control without which there can be no true obedience. The bad effects of too many and too strict rules vary somewhat in accordance with the natural disposition of the child. In timid children there is apt to develop a tendency to deceit and untruthfulness, especially where corporal punishment is the rule. In strong willed and courageous children the result is often obstinacy and rebellion and a conflict in which, though the child may be forced to submit, there is left a rankling sense of injustice. In really weak willed and suggestible children, such a course of treatment seems in some cases to produce an actual arrest of will development, and the obedience itself is dependent upon the immediate influence of authority. On the other hand, a will which never encounters the check of law and authority in opposition to its own desires must also suffer loss, for probably a child's first lessons in conscious self control are learned in the clash between its own instincts and desires and authority (1).

It is undoubtedly good pedagogy with young children to avoid conflict and divert attention from a forbidden object and so avoid impressing the thing forbidden upon the child's mind, but it is also possible to err in this direction quite as much as in the opposite one of too arbitrary an assertion of authority. A very young child cannot be given the reasons why certain things must and others must not be done. But he can readily learn to understand the approval or disapproval which results from conformity to, or defiance of, authority and is very quick to feel whether there is love as well as law back of the authority. A child who never disobeys because his will is never crossed has not yet begun to learn the lesson of self control. A weak willed child cannot be obedient in the higher sense of the word, because his outward conformity to rule is due not to self control but control by another. The strong willed children, with whom, perhaps, in early years there are the sharpest conflicts, are those who under the proper training become most self controlled and are reported as the most obedient.

It will be noted that many of the returns lay especial emphasis on the need that training in obedience should begin during the first weeks of life in the formation of regular habits of eating, sleeping, etc. Children whose training is begun thus early seem to acquire a feeling for law and authority which makes the conscious conflict of will which must inevitably come to every normal child when it finds its instinctive desires interfered with by the will of another, less difficult for the child as well as for the parent. Sully (13) considers that the best children, from a biological point of view, have most of the rebel in them and that the passionate fits of anger and rebellion in vigorous children are perfectly normal in the earliest years of life, yet quite as fundamental in the child is a certain instinctive respect for rule or custom and many of the outbreaks are a protest against a disregard of this feeling. If a child is allowed to have or do a thing on one day and refused it the next, this instinct of order is violated and a sense of injustice roused in the child. That such outbursts are of less frequent occurrence and duration in children whose training in self control is begun in the cradle, is evidenced by many of the cases reported in detail.

The conclusions drawn from the observation material are greatly reinforced by the reminiscent papers giving the mature estimate on the value of training in obedience received. There were 366 answers to this question. These answers represent a very great diversity of training but there is a remarkable uniformity in the estimates of value set upon early training in obedience. Those who have had little or no training feel that it has been a loss and injustice, and that self control and the

necessity of yielding obedience to law and order in organized society has been learned later at a needless cost of suffering. On the other hand those who have been brought up under rigid and strict system of discipline usually feel that less law and more understanding of child nature would not only have conduced to a happier childhood but have been far better for the development of character. Many adults retain a lingering sense of injustice, and state that their childhood was embittered by lack of sympathetic understanding and forced outward obedience. Yet apparently even worse in its effects is that lack of system which over indulges the child, at times, and, when disagreeable consequences result, punishes with severity the faults due to previous laxity and indulgence. Of the training which, though kind and sympathetic, is at the same time invariably firm in insisting upon a few fundamental principles, there is most grateful recognition. Even in disobedient children there is often a craving for law and order that is sometimes recognized by the child, as the following reminiscence illustrates:

F., Adult. I cannot imagine a child whose home training contrasted more strongly with its life at school than my own did. In the latter was order, good discipline and evenness of rule. To this training I know that I responded by a willing obedience, an obedience in which I was conscious of delight. At home, was disorder and chronic disobedience through utter inability to elicit, far less maintain, obedience. My father was easy going and desired peace at any price. My mother was strongly emotional, especially in a religious way, a creature of moods, changeable as the wind. The more I grew to understand her the more I disobeyed her and had my own way. I know that I was often willfully and defiantly disobedient but know, too, that the obedience expected was as a rule both unreasonable and uneven. Yet, I remember that, as a child, I hated *to be able* to disobey, and believe that I should have been happier in a well regulated, orderly home, and for being kept in my place as a *child* rather than allowed the freedom of an adult.

I value very highly the effect which the training in obedience received at school had on my own character. If I was unhappy in the discordant sense of chaos and lawlessness at home, it but served to accentuate the harmony felt in the order and good government at school, I can quite conceive that an utter lack of training in obedience might have proved a terrible obstacle to a future belief in the real though unseen harmony throughout the universe.

It is of interest to note that one of the most extreme cases of chronic contrary mindedness is reported from this same family, where there were several children, and that under different influences, improvement has occurred even in adult life. Other expressions in regard to the value of training in obedience on character are:

M., 20. I think that my training in obedience led me to self control. It in no way cramped my will or individuality. I was trained quite strictly, but no unreasonable (as I now think) demands were made upon me.

F., 22. Was so strictly trained that her mother's approval or disapproval became law to her rather than the idea of right and wrong. Thinks it made a moral coward of her.

F., 22. I was trained rather strictly but kindly, and am glad of it because it gave me self control and a willingness to submit to demands since made upon me which I should not otherwise have had.

F., 25. Was too much indulged, which has made it very hard for me since I have been away from home.

F., 27. I have an abiding faith in the value of training in obedience. It seems to me that such training inculcates the rudiments of obedience to a higher law.

F., 22. I was not at all strictly trained and I am afraid that my lack of training has to answer for the fact that I find it very hard to yield my own opinions or wishes.

Factors which were mentioned as incident to bad training were threatening a child with punishment without fulfillment, uneveness of requirements, indulgence alternating with laxity, allowing a child to disobey because the conflict is too troublesome or inconvenient at the time, indulging a child's caprices when young and then trying to enforce obedience later, too great severity, neglect, except in cases of annoyance or expediency, lack of self control on the part of the one in authority, unreasonable demands, relegating punishment to another person and the use of fear as a motive of obedience.

From the point of view of psychology, training in obedience is will training, and its success must be measured by the degree in which it develops moral self control. Mere outward conformity to rule through fear or compulsion is very likely to induce either obstinate rebellion or deceit in accordance with the disposition of the child. The most obedient children are usually characterized as strong willed and courageous. Mr. Bohannon (3), in his study of Peculiar and Exceptional Children, found that exceptional obedience was often associated with timidity and weakness, but he also found that exceptionally courageous children were frequently characterized as obedient. In the former case, however, the obedience was compliance to the will of another based on physical weakness and timidity, and in the latter, obedience in the higher sense of the word.

In turning to the treatment of obstinacy two aspects of the question present themselves: what general course of training is adapted to avoid or overcome obstinacy, and what is the best treatment for a child during the occurrence of a fit of obstinacy. The answer to the first question, in so far as the present study can give it, is found in the discussion of obedience. If obstinacy is considered as an inhibition due to the weakness of an untrained will, then any form of training which leads to the development of self control and strengthening of will, will tend toward the overcoming of obstinacy.

In the treatment of a child during a fit of *sullen* obstinacy,

experience seems to have taught almost universally that corporal punishment is not only useless but positively harmful. A child can be cowed into sullen submission by superior force but *in not one case* from England, Poland or America, the three countries from which material was gathered, is it reported that such a course of treatment has benefited the child or helped him toward self control in the slightest degree, while numerous cases are reported in which the obstinate disposition has increased "in spite of the most extreme measures." This is especially emphasized in the reports from English schools where corporal punishment is the rule and for most offenses is regarded quite as a matter of course. The treatment which has proved most effectual in by far the larger number of cases, is leaving the child entirely alone until there are signs of relaxation. A child in a fit of obstinacy is not in a condition to be reasoned with, brute force apparently tends to increase rather than decrease the cramp of will and usually arouses anger, if it is not already present, but if the child is left entirely to himself the nerve tension tends to decrease and the physical condition to return to the normal. The loneliness which every rebellious child feels, however hardened he may appear, and the sense of being cut off from approbation and companionship, is increased either by being left alone or ignored in a room where others are present, and he becomes far more ready to respond to sympathy and reason. A child in a genuine fit of obstinacy, *i. e.*, in which the child stands out against what he ordinarily recognizes as authority, must be regarded for the time being as in a morbid condition and the problem is not merely to overcome this condition but to accomplish this in a way that will lessen the probability of its recurrence. Though obstinacy has been considered as a weakness of will, it often occurs in otherwise strong willed children, but for the time being the will is not free to act in a particular direction and until self control is re-established the child is unable to cope with the situation. In many cases the obstinate child reaches a point where he wishes to give in and cannot. His will is not sufficiently well trained or strong enough to break through the barriers which inhibit its action. His spirit may be cowed and he may be forced into outward compliance by severity, but he does not thereby advance a step toward self mastery. Probably no severer punishment can be inflicted upon a sensitive child than the feeling of being absolutely ignored and shut out from sympathy and companionship, and even the most hardened little offenders yield to its influence, after a time, even though there may be a show of bravado. Teachers from the London Board Schools, where the children come from the most unfavorable home surroundings, report

that this is the *only* method of dealing with obstinate children which meets with success. Sometimes the child is placed in a room by himself, sometimes simply excluded from participation in all school work or play until the thing required is done. There are, of course, great individual differences. With some children a sympathetic word at the right time may break the spell while others must fight the whole battle by themselves though they are probably helped by a consciousness of sympathy. Concrete cases here furnish the best illustration. Some have already been given in the descriptions of typical cases of obstinacy which include treatment as well.

F., 5. Is subject to fits of obstinacy, when she refuses to anything asked of her. Completely ignoring her is the best treatment and she is usually penitent in an hour or two.

M., 3. Has occasional spells of being sulky and obstinate. Absolutely ignoring him generally works a cure.

F., 4. Very obstinate and willful at times. Sometimes had to be left alone for an hour or two before she was penitent. (In Baby Room). A bright child who, if not chosen when special things were required, would refuse to do anything more that morning. Would sit in her seat and refuse to move or speak. If made to move would cry and scream and continue it through the whole session. Talking, coaxing, and the cane had no effect. The only successful treatment was to take absolutely no notice of her. She would then be all right by afternoon and acknowledge her naughtiness.

F., 9. Had fits of sulking and obstinacy whenever refused anything she wished to do or obliged to do what she disliked. Leaving her unnoticed proved the successful treatment and she has outgrown them.

M., 13. Refused to go to church because irritated by a reproof from his father at the breakfast table. Paid no attention to his mother's instructions to get ready. When his father commanded him to get ready said he would n't go. His father thrashed him until he dared go no further but the boy would not yield and told his father that he might kill him but he would n't go. The father broke down and told him he might do as he pleased. The boy melted instantly and promised to do as he was told.

F., 14. Refused to apologize for rudeness in school. Had her desk set apart from the others and was otherwise ignored. This went on for several days until she could stand it no longer and apologized.

The letting alone treatment, which has been found by experiment to be the most successful in the treatment of obstinacy, seems to be founded upon principles which are sound both from a psychological and physiological point of view. Physiologically the system is in a condition of nervous and muscular strain and correspondingly the mental state is one of resistance which active opposition tends to increase. With nothing to resist, both physical and mental strain are gradually relieved and conditions become normal.

To this general rule of treatment there is apparently one exception. Obstinacy is so frequently accompanied by anger, in at least some of its stages, that it must be taken into account in discussing the state as a whole, though there are forms of

obstinacy in which there is no element of anger. The character of the anger depends upon the temperament of the child and may be sullen and persistent or violent and explosive. It is in cases of the latter class that a different mode of treatment seems sometimes expedient. A number of cases were reported in which obstinacy was accompanied by a violent outburst of anger, which, unless checked, was of a prolonged character leaving the child in a state of exhaustion. In these cases corporal punishment, either in the form of spanking or a shock of some kind, seems to have been not only immediately effective, but to have proved as great a relief to the child as to the parent or guardian. In these cases there is evidently a high degree of nervous tension and the condition is a very near approach to hysteria. Physical pain or shock relieves this tension and drains off the nervous energy in another direction and, from a hygienic point of view, seems the best treatment for this class of cases, which a few examples will suffice to illustrate.

F., 5. Refused to take her place in line for marching because another child had the place that she wanted. When told that she must either take the place given her or remain in her seat, she screamed, kicked and held her breath. On being removed from the room she threw herself on the floor and continued to scream in spite of coaxing and threats of punishment. Was finally given several sharp blows with a rattan. Instantly stopped screaming and sat up with a bewildered look. On being spoken to kindly by the head mistress was responsive and after a few minutes said she was sorry and would be a good girl.

M., 6. On being refused permission to do something he wished, became very angry and refused to be diverted in any way. Threw himself on the floor and refused to get up, kicked and screamed if touched. This continued for an hour when his aunt came in. She put him in a chair and tried to reason with him but he began to scream again. She picked up a glass of water and threw the contents directly in his face. He stopped screaming at once and gasped "do it again."

In reviewing the results of the present study the following points are to be noted:

As a psychological state obstinacy is a very complex phenomenon, involving elements of heredity, physical conditions, and effects due to immediate and remote environment. It may be highly emotional and accompanied by anger and other depressive emotions or there may be a predominance of intellectual factors and a comparatively low plane of emotion. In its positive form it is manifested by persistency in a certain course of action; in its negative form, it is a persistent refusal to act in certain directions.

Its physical symptoms are chiefly those of the accompanying emotions and vary in accordance with these. The one symptom invariably present in all cases appears to be a deficiency of muscular control, either in the form of cramp or temporary paralysis.

Many cases of obstinacy have a physical basis and require physical quite as much as moral treatment. Malnutrition, any form of stomach or liver trouble, eye strain, anæmia, and over fatigue are all potent factors in the production of contrariness and obstinacy.

Hereditary predisposition was stated in about one-fourth of the cases and a family history of various forms of neurosis given in many others.

The obstinacy of old age is due largely to fixity of mental and bodily habits and is increased by the sensitiveness due to a sense of failing powers. Animal balkiness is found to have its psychic roots in the thwarting of instinctive desires, physical conditions, over fatigue of the nerve centres and to be affected by many of the factors which occur in human obstinacy. Pathological cases which are clearly due to a deficiency in voluntary control, appear to be simply exaggerations of ordinary manifestations and strengthen the view that obstinacy is due to a weakness of will. This view is also strengthened by the large proportion of reminiscent cases in which the subjects say that they have really wished to yield but could not.

Training in obedience may be regarded as will training, and as such, tends to counteract obstinacy. For the highest development of voluntary control a certain amount of freedom is necessary. Too many rules and restrictions tend to produce either rebellion and obstinacy or to cause an arrest of volitional development.

The method of leaving alone or ignoring a child during an attack of obstinacy, which experience has shown to be the most successful treatment, is in harmony with both physiological and psychological principles, since it is the course best adapted to diminish the mental and physical tension which are characteristic of obstinacy. The apparent exception to this rule of treatment can be explained by the different physiological conditions, and the need of study in connection with the individual case is shown to be a necessity for intelligent and remedial treatment.

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PREPARING MANUSCRIPT FOR THE PRESS.

By Louis N. Wilson, Librarian, Clark University.

In preparing matter for the printer, whether it be a circular, a magazine article or a book, some one has said that the same care should be exercised as would be taken if the matter were to be used in manuscript form. While this may be looked upon as extreme, and, in our busy, hustling life, impracticable, there is enough truth in it to warrant careful consideration. Manuscripts are undoubtedly better prepared to-day than ever before, yet there is still room for vast improvement. The modern printing office, too, requires better copy, as, with the shorter working day and the higher wages paid, the cost of composition increases year by year.

Copy, then, should not be sent to the printer until it is, as nearly as possible, perfect and complete. It should be written on paper of uniform size (8x11 inches is a good size), on one side of the paper only, and each sheet containing about the same amount of matter, as this enables the printer to distribute the copy among several compositors and allows him to make a fairly accurate estimate of the length of the article. Pins should never be used to fasten sheets together, but the pages should be numbered consecutively throughout. Inserted pages should be numbered alphabetically—as 4a; 4b; 4c; etc. If any pages are removed the sheets should be renumbered, or those removed accounted for on the preceding pages. The pages of individual chapters should not be numbered independently. Use black ink.

If the copy can be typewritten it is much better for both author and printer as it saves time and money in the composing room. The author should, however, look over the copy carefully to examine capitalization, punctuation, etc., as the typewriter may introduce errors which can be corrected without cost before the manuscript is set up. If the copy is written, the writing should be legible, and no abbreviations used unless they are to appear in the printed form. Proper names, technical terms, and foreign words and phrases should be written with the utmost care, as they are meaningless to the compositor and the context affords no help whatever. Do not finish a word with a hasty scrawl, as the compositor cannot spend his time puzzling out an author's meaning; and avoid interlineations in a cramped hand.

Verify all references before sending the manuscript to the printer, and do not put it off to be done in proof. Be careful about punctuation. It seems but a small matter to add a comma or to change a period to a semicolon in the proof, but this all takes extra time which the author pays for, and in making even minor changes there is always danger of the compositor dropping out a letter or making other errors. Indicate your own paragraphs. Preserve uniformity in spelling, capitalization and punctuation. A word that may or may not be written with a capital letter should not be written one way in one part of the work and the other way in another part. Adopt one form of spelling and adhere to it throughout. Leave a margin of about two inches on the left side of the manuscript and an inch at the top; if you have any instructions for the printer write them in this margin—preferably in colored ink or pencil.

The two sizes of type most commonly used are employed in this article, the larger is known as ten point, the smaller size as eight point. The larger part of the article is set in ten point solid, the matter on pp. 67, 68 is set in ten point leaded. The size of type is exactly the same, but on pp. 67, 68 a lead has been inserted between the lines. The upper half of page 64 is set in eight point solid while the last paragraph on page 65 and the major part of page 66 is set in the same type leaded. When a change in type is desired it should be indicated on the margin of the manuscript. Be careful to indicate where the change in type begins and where it ends.

Foot notes should be written at the bottom of the page to which they belong, and, if more than one on a page, should be numbered consecutively. They should be separated from the body of the page by a horizontal line drawn entirely across the paper and the words "Foot Note" written opposite the matter in the margin.

In marking division headings use

1. CAPITALS FOR MAIN HEADINGS.
2. Capitals and Small Capitals for Sub-Headings.
3. small capitals for divisions under no. 2.
4. *Italics for side heads.*

All words or letters to be printed in CAPITALS in the body of the text should be underlined three times; small capitals, twice; *italics*, once. If, in looking over the manuscript, it is desired to change a capital to a small letter, draw a line obliquely through the letter to be changed and write l.c., which means "lower case," in the margin opposite. If it is desired to change a small letter to a capital, underline the letter three times.

In dealing with figures follow some definite rule. Some

writers make it a rule to use figures for 101 and over, while for all numbers from one to one hundred, words are used. This must, however, be regulated by the character of the article, but the author should be consistent and not use on one page, for instance, the figures 76 and on another the words seventy-six.

If diagrams or illustrations are used they should be drawn or pasted on separate sheets. Each sheet should be lettered as A, B, C, etc., and at the point in the manuscript where the illustrative matter is to appear write Diagram A, or Plate B, enclosing the words with a line, thus:

DIAGRAM A.

Extracts and quotations should be carefully marked, and, if of more than two or three lines, should be marked to be set in smaller type than that of the body of the work.

Professors E. C. Sanford, of Clark, and E. B. Titchener, of Cornell, made a strong plea for summaries and indexes in scientific articles in the *Am. Journal of Psychology* for Jan., 1903, Vol. XIV, pp. 84-87. The preparation of an index will be mentioned later, but it might be well here to call attention to the value of a bibliography. It is almost criminal in these days to publish a book without a good index, and in some classes of books and articles, a bibliography is almost as important. The common practice among authors is to make references to literature consulted by using foot notes. Now the foot note is not only unsightly, but it is very expensive if used to any extent. The printer's rule is to charge up a page of composition according to the type used to any extent on the page. The price of a page of composition of this size in ten point type, solid, is about $1.20 per page, while the price of a page set in eight point solid, is about $1.80. If there are several foot notes on a page the cost of their composition is computed at the rate of the eight point type in which the foot notes are set. Thus by printing references in the form of a bibliography at the end of the book or the article the author effects quite a saving in the price of composition.

In order to make the bibliography as complete as possible, and with the least amount of labor, it is a good plan to make out slips or cards of all books and articles consulted in the preparation of the manuscript, carefully noting special chapters or passages and adding such notes as would be useful in annotating. These slips should be made out carefully, as the author reads up on any subject, and should contain: name of author in full; title of article or book; if a magazine article, the name of the magazine or publication in which it appears, with place

of publication, date, volume, and both the page on which the article begins and the one on which it ends; if a book, the name of publisher and place of publication, date of issue, and total number of pages. (See *Publications of the Clark University Library*, Jan. and July, 1904.) Good examples of annotated bibliographies are those of Professor W. G. Chambers, in the *Pedagogical Seminary* for March, 1903, Vol. X, pp. 140-143, and Professor A. F. Chamberlain's "Notes on Periodical Literature," in the issues of the *American Anthropologist*. At first blush this making out cards during a course of reading seems a great waste of time, but those who once adopt the plan adhere to it and find that, in the long run, they acquire a large amount of valuable material and save time. When this plan is followed and the manuscript written, the author has only to select from his list of cards such titles as are to be printed, arrange them alphabetically by authors, number them consecutively and add the numbers at the proper places in the manuscript. If these points are borne in mind when work is begun on the manuscript it will save a great deal of time and much annoyance later. For examples of this method see Professor W. H. Burnham's "Outlines of School Hygiene" in the *Pedagogical Seminary* for June, 1892, Vol. II, pp. 9-71—although, unfortunately in this case, the titles in the bibliography were not arranged in alphabetical order by authors—and Professor A. F. Chamberlain's book "The Child. A study in the Evolution of Man," Chas. Scribner's Sons, N. Y., 1900, pp. 498. In the first named there are only two short foot notes, and in the latter very few.

Before submitting manuscript for publication it should be rigidly and critically examined and cut down to the shortest possible point consistent with clearness and a proper elucidation of the subject. Many a good manuscript has been rejected on account of its inordinate length, and one sometimes wishes more that are printed had shared a like fate. In these days of much printing, the wise author will confine himself to a simple straightforward statement of his subject and keep his manuscript within reasonable limits, if he would secure an editor's or publisher's favorable consideration. An author frequently says he cannot possibly reduce the length of his article by a single sentence; but even in such cases they have often been reduced a third or even a half and improved thereby. (See Dr. Sanford's note on this subject, *Am. Jour. of Psychology*, Jan., 1903, Vol. XIV, pp. 86-87.)

As an author prepares his manuscript he should have clearly in mind the style and form it will assume when in print. He should indicate clearly, headings, paragraphs, sections, etc., etc. It is too commonly assumed that this is all done in the

printing office, but it is a very bad thing indeed to edit matter in the composing room and, when this is done, the author certainly pays for it. In many cases it is only necessary for the author to explain to the printer just how his article is to be set, but, here again, one is confronted by the increased cost and the increased liability of errors. The man to whom the explanations are made is not as a rule the one who sets the type, so that he must go over the article carefully and mark it for the compositor, or give the author's instructions to the foreman of the composing room, who in turn must instruct each man as he gives out the copy, often a few sheets at a time.

The rule of the printing office is that compositors shall follow copy. And this is absolutely necessary because, in most cases, several men may be at work upon the same manuscript and if each man were allowed to exercise judgment as to paragraphs, punctuation, capitalization, use of the hyphen, etc., the author would be the first to complain of the result. Each printing house follows some definite rule in such matters. Thus some journal editors change the word through to thru; programme to program; catalogue to catalog, and so on—disregarding the author's preferences because they have adopted the reformed spelling and their compositors are so instructed. English printing houses often change such words as honor to honour; parlor to parlour; criticize to criticise, and so on, because the English compositor has been trained in that way.

Mr. Horace Hart, Printer to the University of Oxford, prefaces his Rules for Compositors and Readers at the University Press, Oxford (16th ed., London, 1904, 47 pp.), by the statement: "The following Rules apply generally; but directions to the contrary may be given in cases of works to be printed for other publishing houses which have also adopted a style of their own."

In special work, where particular modes of spelling are essential, it is well to adopt the custom of some authors who send with their manuscript a slip stating that "This copy has been carefully prepared by the author and the printer must make no changes without the author's consent."

Proof.

The first proof taken after the matter is in type is the "office proof" which is corrected by the printer's proof reader who looks it over carefully while another person reads the manuscript to him. He marks any error made by the compositor and notes for correction any palpable error made by the author. He is supposed at this stage to give careful attention to the spelling, the punctuation, the grammatical construction, the style, and, sometimes, even looks up quotations, references and foreign phrases. Proof readers in large book printing shops

often become very expert and will frequently call the anthor's attention to inaccuracies that had escaped his attention. The "office proof" having been properly marked is returned to be corrected by the compositor who set it up. When this is done another proof, called "author's first proof," is taken. The printer's proof reader compares this with the office proof to see that all the corrections he had indicated have been made and then the author's proof and the manuscript are sent to the author for his examination.

At this point it must be borne in mind that all corrections now made are made at the author's expense. Printers charge from 60 to 80 cts. an hour for corrections in proof, and while the crossing out of a word or a sentence here and there, the changing of punctuation or paragraphs, changing ordinary type to capitals or italics, etc., may seem a very slight matter to the author it often entails considerable expense.

In some cases, where, for instance, words are inserted or taken out, it may be necessary to "overrun" several lines, for you cannot insert or remove matter from a line of type without taking either space or words from the lines immediately above or below the one affected. It is at this point that an author realizes the value of time spent in the preparation of his manuscript. Time saved by hurried work or by failure carefully to revise in writing is doubly lost in proof corrections. Publishers are careful to warn writers on this point as will be seen later, on p. 66.

In correcting proof, therefore, the author should confine himself strictly to essentials. Many writers say they cannot correct an article in manuscript and prefer to do it in proof form; and there is much force in the statement that an article looks altogether different when set up in type. Some people seem to play with their proof and get into the habit of making changes which, from the printer's point of view, seem quite uncalled for. An example of this is where an author had written: "On the following day, after breakfast, I began to feel the effect of the drug." When he saw the proof he changed the sentence to read: "After breakfast, on the day following, I began to feel the effect of the drug." In making the correction the type had to be lifted out to make the change and the f in "feel" dropped out and by an error on the compositor's part a letter p was substituted for the missing f. The author saw page proof and noted no error, but the scientific value of his article was destroyed by the sentence, "After breakfast, on the day following, I began to peel the effect of the drug"—all of which goes to show that only absolutely necessary changes should be made and that proof should be read both in galley and page form with equal care. Proof corrections should be made on the galley proof margins, preferably in ink. If a

colored ink is used the time of the compositor will be saved as he can see more clearly the changes to be made. Long lines connecting the error with the correction in the margin should be avoided as much as possible and when necessary they should be made with great care.

When there are several errors in one word it is better to rewrite the whole word correctly than to indicate each change separately. If several lines of new matter must be inserted, it should be written on another piece of paper and attached to the margin of the proof sheet.

Common errors to be looked for in proof reading are the omission of a letter or syllable, or the substitution of one letter for another, which does not greatly change the outline of the word; as, instution for institution, solidifid for solidified, mouuting for mounting, petion for petition; the insertion of a word which is not in the copy and which does not materially alter the sense—this is especially true of articles and conjunctions; the repetition of a syllable or word which ends one line, at the beginning of the next; the substitution of one letter for another, which sometimes makes sense—as in the case just cited, peel for feel.

When the printer's proof reader is in doubt about the author's meaning he writes in the margin opposite the doubtful line an interrogation point or the letters qu., or qy. Such a query should be examined by the author and, if there is good reason, the passage or word changed; if he desires it to stand he simply draws a line through the proof reader's query.

Authors should see a page proof of their matter. This should be given a careful, final reading. If changes are expensive in galley proof they are doubly so in page proof, as here the introduction or elimination of a word or two often necessitates the "overrunning" or readjustment of several pages. In magazine work the printer will often avoid this overrunning by making the page a line or two longer or shorter, but this should not be encouraged as it certainly detracts from the general appearance of the journal, and a good printer does not like to do it although he is often compelled to.

Type Setting Machines.

The first machine for setting type was invented by an American residing in England, about 1822. He was granted an English patent, but his machine seems never to have advanced beyond the model stage. The first patent granted in the United States was in 1840. Between 1822 and 1890 about fifteen different machines were brought out for setting type. The most practical of these is the Mergenthaler, or Linotype. This machine, operated like a typewriter, casts the letters properly

spaced, or "justified," in solid bars the length of the line. The longest line thus far attempted is five inches. The line when cast passes between knives to be cut to the exact size and is then placed on the galley to be made up into a form. If a correction is desired the line must be thrown out and a new one made. After the type thus cast has been used it is thrown into the melting pot to be cast over again. The linotype machine is in use in about 1,500 offices in this country, including both large and small newspapers, and many book houses, such as Harper & Brothers, and D. Appleton & Co. It is also used by most of the leading newspapers of Great Britain, Germany and France. In the Boston Public Library and in the Library of Congress at Washington it is used for printing catalogue cards. By changing the matrices—the moulds for casting the letters—they are able to print cards in over twenty different languages. The machine reduces the cost of composition in straight matter as one machine does as much work in a given time as four or five hand compositors. It makes a great saving in type, but is very liable to get out of order and is most successful where a number of machines can be used and a machinist kept to make necessary repairs.

Within the past few years a new machine has been placed on the market, known as the Monotype machine. This latter casts each letter separately, which is a decided advantage as it allows greater freedom in corrections. It casts and composes in justified lines by a single automatic operation, which is controlled by a perforated paper ribbon, the product of the manual operation of a keyboard. This machine is preferred for book work, because it permits the correction of errors without discarding the whole line, or, as in some cases, several lines. Indeed type set by it can be corrected as readily as type set by hand. The linotype seems to be preferred in newspaper work.

Each of these machines furnished with capitals and small letters for two sizes of type costs about $3,500. Varieties of type and other accessories usually add about $1,000 more. These machines have many limitations and the general opinion seems to be that the work is inferior to hand work. The saving by machine work is not confined to the increase in amount of work done, but covers a large saving in type. In a book and job office where no machines are used the cost of equipment in type is estimated at $1,000, a man and the depreciation of the stock at 10%, so that a printer employing ten men would make an initial outlay of $10,000 for type and must expend $1,000 annually for renewal. Mr. Theodore L. De Vinne, considered by many as the foremost printer in America, is said to place the figures in his plant about 25% higher than those I have just given. The life of the ordinary type varies of

course—as in the case of long runs of 100,000 copies or more, when the type is rendered worthless, to special type seldom used and never renewed.

Agreements with Publishers.

A very few magazines pay authors for scientific articles. Some editors pay a given sum for an article upon receipt of the manuscript and reserve to themselves the right to publish at their convenience, or not to publish it, holding that what they have paid for is their own to do with as they see fit. Unfortunately, however, the author is too often unaware of this and awaits anxiously from month to month, or quarter to quarter, the appearance of his article. Many an author regrets taking money for an article when he finds that the manuscript is entirely beyond his control; that it may be issued years later, when out of date, and reflect but little credit on him; it may never appear at all; or, it may pass into other hands as an asset of the journal to which he sold it. If the author understands this to be the case, no injustice is done, but in most cases it is not so stated at the time the manuscript is accepted and paid for by the editor or publisher. Some journals, while they pay nothing to the contributor, furnish fifty or a hundred reprints to the author; but this custom does not prevail to any extent.

In publishing a book it is customary to have a contract drawn up and signed by both author and publisher, stating very definitely the terms upon which it is to be printed and published. There are a great many forms of contract and each may contain one or more special clauses governing the particular book involved. Probably no stereotyped form of contract could be devised that would give satisfaction either to the author or to the publisher. There are, however, certain clauses common to all these contract forms which may be of interest here. They are:

1. The author of the work named agrees that the publisher shall take out copyright in his own name, shall have the exclusive right to print and publish the work during the full term of the copyright, and during the full term or terms of any and all renewals of the same; that the author will not, without the written consent of the publisher, write, print, or publish any other edition of the work, or any work of a similar character likely to interfere with or injure the sales of the said work during the continuance of this agreement.

2. The author agrees that he is the legal author and copyright proprietor of the work and that it is in no way a violation of any copyright belonging to any other party. He authorizes the publisher to defend at law any suit for infringement of copyright, or for libelous matter alleged to be contained in the work, and agrees to pay to the publisher such reasonable costs as he may incur in defending such suit and any damages he may be obliged to pay as a result of such suit.

3. The publisher agrees to print and bind the book in such manner as he deems expedient and as shall be satisfactory to the author; agrees to properly advertise the same and to keep the market supplied so long as a reasonable demand for the book exists.

4. The publisher agrees to pay the author a certain percentage on all books sold—it may be ten, fifteen or twenty per cent. of the trade, or the retail price—to make on specified dates semi-annual returns of sales, and semi-annual settlements for the same. No royalty to be paid on copies destroyed by fire or water, nor on copies given away for the purpose of aiding the sale of the work.

5. The author agrees to furnish the complete copy for the work ready for the compositors; to read the proof and furnish copy for the illustrations, if any, and to furnish the index prepared from the page proof. The publisher agrees to pay cost of all alterations or additions in proofs or plates made by the author during the preparation of the work for the press, providing such changes do not exceed ten, fifteen, or twenty per cent., as the case may be, of the total cost of composition and the preparation of the plates. If the cost of such changes exceeds the percentage agreed upon, the excess is to be paid by the author.

6. If, on the expiration of a certain time after date of publication, or at any time thereafter, the publisher decides the work is unprofitable the author agrees, upon written notice from the publisher to that effect, to take from the latter, at cost, the plates and unsold copies; or failing to do so gives the publisher the right to melt up the plates and dispose of the copies on hand as he may see fit, free of any percentage or royalty, and to cancel the contract.

7. Each party to the agreement may assign his interest in the same, but only as a whole, and no part of such interest shall be assigned by either party.

There are, as already stated, many variations from the above, and in this connection it might be well to point out some clauses that should be carefully examined by the author.

It will be noticed that under clause 1 the author agrees not to write, print or publish any other edition of the work or any work of such a character as to be likely to interfere with or injure the sales of the work in question without the written consent of the publisher. Unfortunately, however, there are publishers who grant serial rights in books to newspapers without the permission of the authors. This practice, while more common than is generally supposed, is condemned by the best publishers. Those who resort to it defend it on the ground that it advertises the book and they receive no money compensation from the newspapers. It is extremely doubtful if such serial newspaper publication does help the sale of the book, and the publisher who does not receive cash from the newspaper receives in most cases, its equivalent in advertising space. It is not for the author's best interest and he should see that his contract forbids it. In common justice the publisher should agree not to give or sell serial rights to newspapers or magazines without the author's written consent.

Another practice which is obtaining greatly in these days of

keen competition is a right, which some publishers claim, to sell cheap editions, at a price suitable to themselves, without consultation with the author, and often without payment of adequate royalty.

The author may take out copyright in his own name if he prefers to do so.

Under clause 2 provision is often made for prosecuting, by the publisher, any infringement of the copyright. In such cases the author and publisher usually share the expense of such prosecution and divide equally any damages awarded by the court. But the author may reserve the right to prosecute at his own expense and retain any damages awarded.

Under clause 4 probably the greatest variations occur, as the terms an author may make with his publisher depend very largely upon the author's standing as a writer, or as an authority in some special field, and upon the character of the work itself. Some works, by their very nature, can never attain a large circulation and in such cases the publisher may insist upon the author guaranteeing the cost of the composition and the plates. If the work proves a success author and publisher share alike in the profits after the cost of production has been met. In many cases the publisher, while granting the author a certain percentage on all copies sold, defers the first payment until after the cost of publication has been defrayed, or until one thousand copies have been sold. In some cases the royalty may be arranged upon a sliding scale, as 5% on the first thousand, 10% on sales between one thousand and five thousand, and 15% on all sales above five thousand.

Under clause 5 the publisher will, in some cases, allow a certain fixed sum for making an index, but this properly belongs to the author. The matter of alterations in proof has been treated earlier in this paper. That it is often a sore point between author and publisher is unfortunately too true. Some publishers attach to their contracts a special clause relating to changes in proof, somewhat as follows:

"Let it be urged that the manuscript be delivered in final and complete form just as the author wishes it printed. To correct manuscript requires merely the stroke of a pen; while to correct type is laborious and expensive. The cost of author's corrections in the proofs could be avoided entirely if the original manuscript were made absolutely correct. It should be gone over with great care before it is forwarded to the publishers. Especially should typewriters' errors as to punctuation and the use of capitals be corrected. The type-setter works "by the piece;" his wages depend upon the amount of work he can perform, and this amount depends directly upon the legibility and systematic arrangement of the manuscript."

"Permit us to invite your particular attention to the . . . section of the contract. The publishers' presumption must be, as stated in the contract, that when a manuscript is sent in to be printed, the author's work has been done. The cost of departures from the manuscript in proof should not therefore fall upon them. It belongs to the author's part, the preparation of the text. We are glad, however, to allow ten per cent. of the cost of the plates for such changes, a margin usually more than sufficient. While we regret extremely that occasionally an author's bill for these changes in excess of the ten per cent. is more than he anticipated, we feel compelled to hold that it is part of the cost of writing the book, for which his copyright returns are expected to reimburse him, just as the cost of manufacturing the book in first-rate style and adequately "pushing" it belongs to the publisher. Without such a limit of our liability, we could not safely accept manuscripts, and in some cases could not afford to publish them. From the nature of the case, changes of this sort can only be charged for by the hour. We can only say that we insist most rigidly that authors shall not by any accident be overcharged."

"It is understood and agreed that a percentage of the full cost of the plates shall be allowed the author for changes made by him in type or in plates during the process of making the plates or afterwards, and that the cost of author's changes *in excess of this amount shall be charged to the author.* The cost of correcting the errors of compositors will not in any case be charged to the author, but he will find that the cost of his own changes will accumulate more rapidly than he would anticipate, unless he has had great experience. It will be advisable for him to make his manuscript as nearly perfect as possible."

In all that has been said about alterations in proof the matter has been considered from the standpoint of the publisher and with a view to avoiding expense to the author. Publishers, however, do not object to changes if the author is willing to pay the excess. They realize that a later experiment, or a recently published result, may necessitate large alterations in proof, and that a fine literary production is often improved—like any work of art—by the hand of the master. If a change in proof will be an advantage it should by all means be made, but it must be made at the author's expense.

Proofreader's Marks.

× Change bad letter.	≡ Straighten lines.
⊥ Push down space.	⊏ Move over.
ϑ Turn over.	□ Em quad space.
ℌ Take out (*dele*).	/1/ One-em dash.
∧ Left out; insert.	/2/ Two-em dash.
※ Insert space	¶ Paragraph.
V Even spacing.	No ¶ No paragraph.
⌣ Less space.	*w. f.* Wrong font.
⊂ Close up entirely.	*stet.* Let it stand, or .....
⊙ Period.	*tr.* Transpose.
,/ Comma.	*Caps.* Capital letters.
ⓒ Colon.	*s. c.* Small caps.
;/ Semicolon.	*l. c.* Lower case or small letters.
℘ Apostrophe.	
"/" Quotation.	*Ital.* Italics.
-/ Hyphen.	*Rom.* Roman.

Example of use of Proofreader's Marks.

Though a variety of opinions *exist* as to the individual by whom the art of printing was discovered first; yet all authorities concur in admitting Peter Schoeffer to be the person who first invented *cast metal types*, having learned the art of cutting letters from the Guttembergs; he is also supposed to have been the first who engraved on copper plates. The following testimony is preserved in the family by Jo. Fred. Faustus of Aschaffenburg. 'Peter Schoeffer of Gernsheim, perceiving his master Fausts design, and being desirous ardently himself to improve the art, found out (by the good providence of God) the method of cutting (*incidendi*) the characters in a *matrix*, that the letters might easily be singly *cast* instead of being *cut*.) He privately *cut matrices* for the whole alphabet. Faust was so pleased with the contrivance that he promised Peter to give him his only daughter Christina in marriage, a promise which he soon after performed.'

(67)

Corrected Proof.

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Where only two words are to be transposed the correction is made as in Example of Proofreader's Marks, line 2, on the opposite page, but where several words are to be transposed each one should be numbered in its order, as in line 9.

ELEMENTARY EDUCATION IN ENGLAND.

By Anna J. McKeag, Wellesley College.

Two years ago, Dr. Sadler, then Director of Inquiries and Reports, said to an American audience, "Every nation is controlled in part by its own past and cannot change its methods of education as if they were merely mechanical devices of photogravure or electric traction. Any ideal of education which is alive has its roots deep in history and possesses profound psychological significance. It is not a thing to be lightly tampered with or recklessly destroyed."

Without a proper recognition of this traditional and historical element it is not possible to appreciate and interpret the attitude of the two parties in the present educational controversy in England. English education has had, to use Sadler's words, "a contorted, painful growth." Lord Roseberry once characterized it as "a chaos of almost haphazard arrangement." It is like a great house composed of irregular and inharmonious additions to a primitive hut. The succession of parliamentary enactments, including even the Act of 1902, are to be regarded as repair-work; for England is still unwilling to tear down the ancestral hut.

Of these historical and traditional elements three at least demand consideration in any exposition of the present situation: (1) the origin of the Voluntary Schools; (2) the traditional attitude of the government in regard to the management and support of schools; (3) the provisions of the Act of 1870 which are annulled or modified by the Act of 1902.

The Voluntary Schools, which are the chief bone of contention in the present controversy, had their beginning nearly a century ago. It is a singular fact that neither of the two men to whom their inception is due had any marked originality or breadth of view in education, both of them being decidedly mediocre in natural gifts and intellectual attainments. "Both," says Sir Joshua Fitch, "saw one particular phase of education in false perspective." And yet the history of elementary education in England in the early part of the nineteenth century is practically the history of the two educational organizations founded by Joseph Lancaster and Andrew Bell.

Lancaster was a warm-hearted, impulsive, philanthropic, improvident young fellow who, thwarted in his project of run-

ning away from home to go as a missionary to the Jamaica negroes, turned his altruistic zeal in another direction and opened in his father's poor little house the Borough Road School, free to any children who could not afford to pay fees. It was impossible for one man to teach, by any of the methods then in vogue, the thousand children who flocked to the school, and Lancaster hit upon the expedient of selecting a number of older boys to teach the younger the lessons they themselves had already learned. Thus arose, from the necessity for economy, the Monitorial System, afterwards much lauded as a great educational discovery. Everything was reduced to system. The school itself was a regiment with a complicated scheme of badges, officers and tickets. Of scientific pedagogy Lancaster had none: there is something almost touching in the naïve enthusiasm with which he declares, "If 100 boys spell each 100 words for 200 mornings, there will be a grand total of 2,000,000 words spelled in the year!"

Philanthropists and statesmen became interested in Lancaster's work. A royal audience was obtained and the king himself subscribed to the cause, pleased, it is said, by Lancaster's reply to his question as to how one master could keep a thousand boys in order: "By the same method by which thy Majesty's army is kept in order." In 1808 the Royal Lancasterian Society was formed to aid Lancaster's work; this society became in 1814 the British and Foreign Schools Society which still exists and controls about one out of every fourteen of the Voluntary Schools. The "British and Foreign" schools are non-sectarian, but religious; no denominational teaching is allowed in school hours. These schools were favored by the Whig party, the Edinburg Review being always a stout champion.

The work of Lancaster and his Society naturally was viewed with disfavor by the Anglican clergy. These opponents of non-sectarian education, looking about for a man capable of organizing a rival system of elementary schools in which the doctrines of the Established Church should be taught, found Andrew Bell. Bell was a clergyman, rather narrow, intensely practical, definite in his aims, wholly self-satisfied, "a Philistine," says Fitch, "smug," says another biographer, and yet another, "a man vain of his literary ability whose writings show about as much literary skill as the minutes of a banking corporation." While superintendent of the Military Orphan Asylum in Madras he had lighted upon the expedient of setting the older boys to teach the younger; the very Monitorial System which Lancaster had independently discovered. Upon his return to England the church found in him a leader for its educational schemes, and the result was the establishment, in 1811,

of the "National Society for the Education of the Poor in the Principles of the Established Church." The schools founded by the National Society soon became very numerous. At present over four-fifths of the Voluntary Schools are National Society schools. In the early days the religious instruction in these schools was emphasized to an extent almost incredible. In one of the official text-books in arithmetic this is a sample problem: "The children of Israel were sadly given to idolatry, notwithstanding all they knew of God. Moses was obliged to have three thousand men put to death for this grievous sin. What digits would you use to express this number?"

To summarize: The schools of the British Society and those of the National Society both used the Monitorial System, and the curriculum was much alike in the two, except in the matter of religious instruction. The British schools were non-sectarian and made use of the Bible by reading without comment; in the National schools the doctrines of the Established Church were taught. It should be kept in mind that the term "Voluntary Schools" as used in the present controversy includes the schools of the Wesleyan, the Roman Catholic and other societies as well as those of the two societies just mentioned.

Turning now to the second of the historical elements which are essential parts of the present situation, the traditional attitude of the government toward the control and support of schools, we find that until 1833 the British government had given not a penny to the cause of education. In vain Lord Brougham had tried to rouse the British conscience to a sense of its duty to the children of the poor. In 1833, however, in the wake of the Reform Bill agitation, came an event almost unnoticed at the time, but epoch-making in the light of subsequent history: the first governmental grant to elementary schools. The grant was pitifully small, only £20,000, and was not given by act of parliament, for parliament would never have voted it, but was slipped in as an item in the government budget. This grant, it should be noted, was to be administered by the Voluntary Societies. From such a small beginning grew the principle of government aid to voluntary (denominational) societies: a principle which, it has been said, "came to call, and stayed thirty years."

From this time until 1870, education continued to receive alms at the back door of the government. Parliament steadily refused to legislate in regard to education. When the Queen, in 1839, published an order creating a "Special Committee of the Privy Council on Education," the House of Lords marched in procession to carry a protest to the royal palace, fortunately in vain. This Committee, however, controlled the schools only in the sense in which a Scotch fish-wife controls the men of her

family—by holding the purse-strings; since its inspectors had, as their chief duty, to decide whether or not individual schools should receive the government grant.

Still darker days were in store for education. In 1861 the government, looking about for a chance to retrench expenses, instituted through Mr. Lowe (the man who has gone down to history as the Minister who denied the possibility of a science of education) the educational abomination known as Payment by Results. By this scheme the government grant was distributed according to average attendance and "passes" in reading, writing and arithmetic. This is the period of "codes and cram," criticised by Matthew Arnold as productive of mechanical teaching and mere rote-learning. The aim of economy, however, was subserved: the grants decreased; teaching became unpopular, and many teachers found other callings more desirable.

Thus, in 1870, education was little more than a form of pauper relief. The government grant was administered entirely through the Voluntary Societies, the only check upon these societies being the system of inspection by government. With one small exception, up to 1870 there was not a single act of parliamentary legislation in regard to education. Says Craik, "The Statute Book was absolutely ignorant of a system which had involved the expenditure, from public funds alone, of more than 10,000,000 pounds sterling, which was regulating the education of about one-half the children in the country, and which had introduced a new and strange element hitherto unknown to English life. No obligation rested upon a single school manager throughout the country to continue the work he had begun. There was nothing to render it impossible that the voluntary managers should by common consent strike work and thus render the education department a piece of useless machinery, without the steam that was necessary to keep it in motion."

The Liberal party recognized these defects in the existing state of affairs, and saw that the time had now come for making education a subject for parliamentary legislation. In 1870 the Liberals secured the enactment of the Forster Bill, in the framing of which Mr. Gladstone had a large share. This act was epoch-making; most of its provisions remained unaltered for thirty-two years; and a knowledge of its essential features is indispensable to an understanding of the present situation in England.

Turning, then, to the act of 1870, the third of the historical factors which enter into the present controversy, we find that there are two provisions in the act important for our consideration. These are, (1) the institution of School Boards; (2) the establishment of a local rate.

The School Boards thus established are to be the local education authority for boroughs or parishes and are to be elected by the burgesses (of a borough) or the rate payers (of a parish) whenever the Education Department finds that the existing educational accommodation is inadequate. School Boards are to provide school accommodations and maintain the efficiency of the schools. It must be kept in mind, however, that the School Boards have no control whatever of the Voluntary Schools, which may exist as before. The School Boards have to do only with the new "public elementary" schools created by this Act: schools in which the chief instruction is in elementary subjects, and in which no religious instruction is given to which parents object. No religious formula or catechism may be taught in these public elementary schools; this is the provision usually referred to as the Cowper Temple Clause. It should be added that a Voluntary School may become a public elementary school by omitting all teaching of religious formularies except on the one or two days when diocesan inspection is made. It should also be added that School Boards have nothing to do with secondary or higher instruction, as some of them have discovered to their sorrow in recent years.

In regard to the second of the chief provisions of the Act of 1870, the establishment of a local rate, it should be noted that no part of this rate may be given to Voluntary Schools. It belongs exclusively to the new Board Schools. Both Board Schools and Voluntary Schools, however, may receive the government grant, and both may charge tuition fees to eke out their support.

Thus, since 1870, two great classes of schools have existed side by side in England: the Board Schools, administered by the local School Boards, supported partly by a local rate, and prohibited from giving sectarian instruction; and the Voluntary Schools, conducted by the National and other religious and philanthropic societies, supported by the contributions to the societies, by the government grant and by fees, and offering instruction in church doctrine. In 1902 the number of Board Schools was 5,878; the number of Voluntary Schools 14,275, over four-fifths of the Voluntary Schools being administered by the National Society and therefore under the control of the Church of England.

Such was the situation in 1902. Mr. Gladstone, shortly before his death, had predicted that the next great issue in English politics would be an educational one, and the prediction was fulfilled in the agitation over the Education Bill of 1902.

The bill was framed by the Conservative party: its chief provisions are attributed to Lord Salisbury and Mr. Balfour. The measure was deemed so important that, contrary to custom, it

was taken charge of in the House of Commons by Mr. Balfour himself. It met with severe criticism and bitter hostility during the fifty-nine sessions in which it was discussed in the House, Mr. Bryce being the leader of the Opposition. It was felt, indeed, that the life of the Conservative Ministry was staked upon the passage of the Bill.

The first reading was on March 24, 1902. It was introduced into the House of Lords December 3, 1902, and received the royal assent December 18, 1902.[1] The end was reached only by the "guillotine application of the right of closure."

The opposition to the Bill did not cease with its enactment. Soon after it became operative, Wales was in open revolt against it, and there were in England 55,000 Passive Resisters, persons who for conscience's sake refused to pay the local rate, and who allowed their furniture to be levied upon by the local authority. I have before me a bright-colored poster dated September 25, 1903, in which it is announced in large headlines that "the goods which have been forcibly taken from the houses of several persons who have refused, on conscientious grounds, to pay the education rate, will be sold at the Crown Hotel on Friday next," and that "a public demonstration in favor of the repeal of the Education Act will be held immediately after the sale." This resistance has not yet ceased. Nonconformist ministers here and there still preach against what they term the Great Betrayal. Many mass meetings have been held to protest against what is called "an attempt to wrest from us our religious liberties and the right to educate our children." The Nonconformist, as he sees his tables and chairs beneath the auctioneer's hammer, feels himself a modern Hampden, upholding the liberties of his country.

What then, are the provisions of the Act of 1902 which have caused this state of affairs?

In his opening speech, Mr. Balfour, as reported in the London Times of March 28, 1902, stated the purposes of the Bill to be as follows:

1. To bring all forms of education (primary, secondary, and technical) under *one* form of control.
2. To remove the causes of denominational dissension.
3. To provide for the training of teachers.
4. To devise a scheme for the continuance of the voluntary schools.

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[1] The Act applies to Wales and England, except London. A special Act known as the Education (London) Act, 1903, was passed August 14, 1903, for London. The principles of the Act of 1902, are embodied in the (London) Act of 1903. The Local Education Authority for London is the London County Council. The Education Committee will consist of Members of the Council, with one woman member and a possible body of experts.

In the light of subsequent events the second of these statements reads strangely. The third we may pass by for the present as it is not a main subject in the controversy. The real issue is in the method by which it is proposed to carry out the first and the fourth of Mr. Balfour's principles. The parts of the Act which embody these methods may be briefly summarized:

A. The Act of 1902 abolishes the School Boards (established by the Act of 1870) and the School Attendance Committees (established in 1876) and substitutes a Local Education Authority, namely, the County or Borough Council. In other words, education is handed over to municipal and county control; it is no longer managed by a School Board elected *ad hoc*. It should be noted that this Local Education Authority is to control both "Provided" Schools (the former Board Schools) and "Non-Provided" Schools (the former Voluntary Schools).

Each Local Education Authority (Council) shall establish an Education Committee constituted as follows: (1) a majority of the committee must be appointed by the Council and (except in counties) must be members of the Council; (2) where it is desirable, persons of experience in education and nominated by other bodies may be appointed; (3) women must be included.

Moreover, each public elementary school is to be governed by a body of managers:

(1) In "provided" schools the managers are not to exceed six and are appointed by the Council.

(2) In "non-provided" (voluntary) schools the managers are not to exceed six, not more than two of these being appointed by the Council, and not more than four being *foundation* managers. Thus it becomes almost certain that two-thirds of the managers will be of the religious denomination to which the school belongs.

The new Act, therefore, places each elementary school under a body of Managers and a Local Education Authority (Council), the latter delegating most of its administrative details to its Education Committee. The duty of levying the education rate, providing new schools, and inspecting schools is vested in the Local Education Authority. The duty of appointing and dismissing teachers is vested in the Managers, subject to the approval of the Local Education Authority. Head-teachers in non-provided schools are subjected to a religious test.

B. Under the new Act the expenses of maintaining public elementary schools are met, in part, out of the local rate. It will be remembered that under the Act of 1870 the local rate could be applied only to the support of Board Schools; under the Act of 1902 it is applied to both provided and non-provided schools.

C. The most important provision of the Act in regard to the religious instruction to be given in non-provided schools is the so-called Kenyon-Slaney Clause, which reads as follows: "Religious instruction given in a public elementary school not provided by the local education authority shall be, as regards its character, in accordance with the provisions, if any, of the trust deeds relating thereto, and shall be under the control of the managers. Provided that nothing in this sub-section shall affect any trust-deed for reference to the bishop or superior ecclesiastical or other denominational authority, so far as such provision gives to the bishop or authority the power of deciding whether the character of the religious instruction is or is not in accordance with the provision of the trust deeds."

Such are the most important of the provisions of the Act of 1902 which affect elementary education. The controversial literature on the subject is too voluminous to admit of detailed discussion, but the chief objections which have been urged against the Act by Liberals and Nonconformists may be grouped in two classes:

1. *Objections to the administrative bodies created by the Act.* The opposition in this case takes several different forms.

Many of the Liberals find in the new Act not the single educational authority promised by Mr. Balfour but three new authorities in addition to the Board of Education: the Councils, the Education Committees, and the Managers. Mr. Bryce finds this a serious objection to the Act. Instead of simplicity the Act brings multiplicity of authorities.

Moreover, it is urged, the Education Committees are not directly responsible to the rate-payers, although these Committees will probably discharge the most important functions of the local education authority.

But a still more emphatic protest is made against the administrative system of the new Act, because it abolishes the School Boards established by the Act of 1870. The School Boards themselves were unwilling to be abolished, and many educators testify to the good work done by these Boards, especially in the large cities. Sir George Kekewich, a former Secretary of the Board of Education, goes so far as to say that the London School Board perished because it offended the Tory government by doing its work too well; indeed, he adds, the London School Board did a greater work in a shorter time than has ever been accomplished by any educational authority in the world. The School Boards elected *ad hoc*, devoted themselves to education, while to the Councils, education is but one among many functions, and will naturally receive less attention.

2. *Objections to the status given by the Act to the Volun-*

tary Schools.[1] Under the new Act, non-provided schools as well as provided schools are supported, in part, out of the local rate. Mr. James Bryce declared the Bill to be "not an Education Bill, but a Voluntary Schools Endowment Bill." Sir Joshua Fitch declared that the purpose of the Bill was to give the denominational system a renewed chance of permanence." Says Principal Fairbairn, "It uses civic money for purposes the citizen conscientiously detests; these purposes being not civic, but sectarian." Another speaker adds, "It quarters church schools on the public purse, and yet leaves the control to the church."

An analysis of the Nonconformist and Liberal position will show three important objections made to the maintenance of non-provided schools from the rates.

(1) Under the new Act two-thirds of the Managers of these schools will be denominational. (2) The head teachers are subjected to a religious test. (3) The Kenyon-Slaney clause perpetuates denominational teaching.

The view of the Act held by the average Nonconformist is well expressed in a recent article in the Contemporary Review: "The Voluntary Schools . . . are still 'her' (the church's) schools, while eleven pence out of every shilling comes out of the citizen's purse. The teachers are practically hers to appoint and to dismiss, and the teachers make the schools. Her monopoly in thousands of country districts is practically secured, her authority confirmed, her propaganda invigorated by immunity from bankruptcy."

Let us glance briefly at the arguments adduced in support of the Act by the Anglican clergy and the Conservative leaders.

1. The Church of England has, since 1814, contributed to the support of the Voluntary Schools. The buildings and endowments are hers by ancient right. What more reasonable than that she should dictate the form of religious instruction and should appoint the head teachers?

2. The English people are opposed to secular education.

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[1] I quote the peroration of a sermon on the Education Act as an illustration of the seriousness with which this phase of the question is viewed by Dissenters.

"I will not submit to this modern Nebuchadnezzar. I have broken down my bridges and burned my boats. In this battle right beside my fellow Free Churchman I will stand. For a measure so treasonable to the liberties of Englishmen . . . I will not subscribe, no, not a penny. The time has come as truly as it came to Peter and John, . . as truly as it came to Martin Luther . . . as truly as it came to John Hampden . . . as truly as it came to John Bunyan . . . the time has come when every man must boldly stand by the decision of his conscience. To men of conscience it is not . . . a balance between pictures and armchairs and right. These things are nothing. Truth! liberty! righteousness!"

They wish some kind of religious instruction to be given to their children. Many, it is true, advocate what they call "undenominational religious teaching." This seems plausible, but is open to objection. As Lathbury says in a recent article, "Their idea seems to be that all religions are alike up to a certain point. Undenominationalism is the stock which serves as the common foundation of all soups. Denominationalism is only the flavoring which differentiates one soup from another." But, to quote the same writer, "what is surprising is that Nonconformists should equally desire to see this sort of teaching (undenominational religious instruction) made universal and provided at the cost of the rate-payers." "Established Undenominationalism" is as offensive to the Church as is Established Anglicanism to Dissenters.

3. The Act is to be regarded as a compromise. The church concedes much. She gives her school buildings into municipal control. Though she retains the right to appoint her own head teachers, she gives to the Managers the privilege of appointing assistant teachers. For thirty-four years the Nonconformists have had the benefit of the Cowper Temple clause in the Act of 1870. These and many other provisions are real concessions.

4. But the argument that is the basis of all others is the existence of an Establishment. Why should not the religious instruction in schools supported in part by parliamentary grant be of the form established as the state religion? Granted an Establishment, public support of Voluntary Schools is a necessary inference.

These, briefly, are the main lines of argument for and against the Act. There is a very general feeling that the Act will not long go unamended. The difficulties in Wales are still far from being solved, despite the coercive measure passed a few months ago—the Welsh Defaulting Act. Many forms of amendment have been suggested to meet the situation in England. One of the most remarkable is the proposition of the Bishop of Bath and Wells to establish, in connection with the Board of Education, "a clearing house, solely to relieve the consciences of those who profess to be oppressed." Each rate-payer who is conscientiously opposed to paying any rate toward the support of voluntary schools is to earmark his rate "for the support of provided schools only." An adjustment of the rates in different localities can be easily made at the clearing-house. The idea of relieving one's conscience by means of a clearing-house is at first rather startling.

Of all the proposed forms of amendment, perhaps, that which seems to meet with most approval is the suggestion that the local education authority should assume entire control of

secular instruction, taking over all Board Schools, and renting all buildings occupied by Voluntary Schools. Each denomination may then provide, at its own expense, instruction in religion and church doctrine for children whose families apply for it.

In Hertfordshire an amicable adjustment has been made of one of the religious difficulties. A committee composed of Churchmen and Nonconformists has drawn up a syllabus of religious instruction for use in the schools. The following recommendations are made, as reported in the Educational Times, November 1, 1904:

(1) The Bible shall be read, and such explanation and instruction in Christianity and morality given therefrom as are suited to the capacity of children. (2) Any part of the Bible may be learnt by heart, in addition to the portions prescribed. (3) The lessons should be as practical as possible, and especial pains should be taken by the teacher when teaching the Old Testament to show where, by the teaching of Christianity, we have in any case outgrown primitive religious views, and pictures should be used. (4) Working lists of lessons based upon the syllabus should be drawn up at the beginning of the school year by the head teacher of each school and submitted to the inspector of the County Council at the time of religious inspection.

Despite such sporadic cases of amicable adjustment of difficulties, the success of the Act is still problematic. Even that most conservative journal, the Educational Times, has to admit that "anticipations of the gradual disappearance of differences, and the rise of a common ideal of promoting education apart from political and religious views seem dependent upon a very large 'if.'"

Leaving, now, this brief account of the great controversy after the Act of 1902, let us turn to a closer examination of the schools themselves. It may be helpful, in the imperfect conspectus of the system which can be given within the limits of this paper to group the main facts under the headings, Administration, Teachers, Attendance, Curriculum and Finance.

1. *Administration.* The Board of Education, which was established by the Board of Education Act, 1899, and is the successor of the Committee of the Privy Council on Education (1839), and the Education Department (1884), stands at the head of the administrative system. The Board consists of a President and the Lord President of the Privy Council (though these may be the same person), the five Principal Secretaries of State, the First Commissioner of the Treasury, and the Chancellor of the Exchequer. The President is appointed by the Crown; the others are members *ex officio*. The Board is authorized to appoint

such secretaries and officers as may be needed. A Consultative Committee is appointed by the Crown, "consisting, as to not less than two-thirds, of persons qualified to represent the views of universities and other bodies interested in education;" in other words, a committee, two-thirds of the members of which must be experts in education. As a matter of fact, the Consultative Committee, now consisting of eighteen members, is a strong committee, with great opportunities for influence and usefulness.

The Board of Education has control of Elementary Education (Whitehall Office), of Science and Arts classes (South Kensington Office), of the inspection of secondary schools on the application of these schools, and of certain educational matters formerly under the control of the Charity Commissioners. Under the Act of 1902, it is also empowered to settle disputes between managers of non-provided schools and local education authorities, and disputes regarding provision for new schools, to enforce provision for elementary education and to make provisional orders for education committees.

Each public elementary school has (1) a body of Managers, responsible to (2) the Local Education Authority which appoints (3) an Education Committee, and is responsible, in part, to (4) the Board of Education. This Board of Education has been well described by Brereton as a "mean between the Bureau of Education in the United States and the strong, centralized Ministry of Public Instruction in France." The Board (1) administers the parliamentary grant, (2) arranges for the inspection of schools, (3) keeps (through its Consultative Committee) a Registry of Teachers, and serves (4) as a bureau of educational information. Since the Act of 1902, the administrative work of the Board has been carried on in three departments: Elementary Education (the Whitehall Office), Secondary Education, and Technical Education (South Kensington Office). Each department is under the charge of a Principal Assistant Secretary.

The Inspectorate of the Board (Whitehall Office) includes the following inspectors of elementary schools: 1 Chief Inspector; 11 Divisional Inspectors, each having charge of the elementary schools and training colleges in his division; 87 Inspectors; 23 Junior Inspectors, six of these being women; 52 Sub-Inspectors; 11 Sub-Inspectors for special subjects, such as manual training; 20 Examiners. Since 1882, educational experience, as well as scholarly attainments, has been required for appointment to inspectorships. No clergyman may be an inspector. Inspectors may visit schools without notice. They are expected to report to the Board upon the efficiency of the schools and this report determines the giving or withholding

of the grant. Not only the teaching but also the sanitary condition of the school and the book-keeping of the managers are fit subjects of investigation. Indirectly, of course, the Inspector can exert a decided influence upon the methods of teaching, though this is not the primary function of his office.

The Register of Teachers is kept in two columns, A and B. A includes the names of all certificated teachers; B, teachers holding one or more scheduled qualifications, such as a university degree or a diploma.

The Board exercises its function as a bureau of educational information by the publication of its own Reports and also the Special Reports, the latter until recently under the direction of Dr. Sadler. It publishes, also, from time to time, the Code, a digest of minutes and legislation.

2. *Teachers.* The Board of Education recognizes six grades of teachers: (a) Probationers, who must be approved by the Inspector and must be between 13 and 16 years of age, and who may teach only half-time; (b) Pupil-teachers, who must pass an examination before appointment, and must be between 15 and 18 years of age, and must not teach more than 20 hours in one week; (c) Provisional Assistant Teachers, who have completed their engagement as Pupil-Teachers but are not yet ready for the next grade of work; (d) Assistant Teachers, who have passed the King's Scholarship Examination, the final examination for Pupil-Teachers, or who are graduates of universities; (e) Provisionally Certificated Teachers, who have obtained a place in First Class of the King's Scholarship Examination, and who have had the requisite teaching experience; (f) Certificated Teachers, appointed on the basis of examination and proficiency in teaching.

One of the distinctive characteristics of English education is the pupil-teacher system. English writers on the subject very generally approve of the system on the ground that it lessens expense, gives to the child some teachers nearer his own grade of intellectual development, and provides training of teachers at a time when their minds are most open to new ideas and their whole personality most plastic. It must be acknowledged, though, that such a system is open to some of the objections which were made to the old monitorial system. Some of these dangers are lessened, however, by the care that is exercised in providing suitable instruction for pupil-teachers, such instruction being given either by the head-teachers or in "Central Classes."

Of the teachers employed in the public elementary schools 76% are women. The average salary of a certificated schoolmistress is £86; of a certificated schoolmaster, £129. By

contributing a certain sum annually, a teacher may, at 65 years of age, receive a superannuation allowance.

Provision for the professional training of teachers is made by the 65 Training Colleges, of which 46 are residential and 19 are day training colleges.

3. *Attendance.* In the Board of Education Report for 1900-1901 the laws in regard to compulsory attendance are thus summarized:

(1). If the by-laws contain a special provision to that effect, children may be employed in agriculture at the age of eleven, provided that they attend school 250 times a year up to the age of thirteen.

(2). With this exception, no child, subject to the by-laws, can obtain either partial or total exemption under the age of twelve.

(3). A child between twelve and thirteen, or (if the by-laws are extended) between twelve and fourteen, can only obtain total or partial exemption on the conditions prescribed by the by-laws.

(4). In districts where the by-laws are still restricted to children of thirteen years of age, a child between thirteen and fourteen can obtain total exemption either on passing the Fourth Standard, or on making 350 previous attendances after five years of age in not more than two schools during each year for five years.

(5). A child between twelve and fourteen may claim partial exemption on making 300 previous attendances annually for five years, but in the view of the Board this exemption can only be claimed where the by-laws themselves contain a provision for partial exemption.

It should be noted that an "attendance" means, for infant scholars, one and a half hours; for older scholars, two hours; for "half-timers," one hour and twenty minutes.

4. *Curriculum.* Three classes of elementary schools are recognized by the Board of Education: Infant Schools, for children from three to seven years of age; Schools for Older Scholars, for children up to the age of sixteen; Higher Elementary Schools, for children from ten to fifteen years of age.

Elementary schools must limit themselves strictly to elementary subjects, if they would obtain the parliamentary grant which, for elementary education, is administered through the Whitehall Office. This point was tested in the courts in 1898, in the famous Cockerton case. Mr. Cockerton, as auditor, disallowed the expenses charged by the London School Board for paying the salary of teachers of drawing for classes in Board Schools, the teaching having been of technical rather than elementary character. The courts sustained this decision, thus

emphasizing the distinction between the function of Whitehall and South Kensington.

The course of instruction in Infant Schools includes reading, writing, number, simple lessons on common things, needlework, drawing, singing, and physical exercises.

In Schools for Older Scholars, the course of instruction includes three classes of subjects: (1) "Obligatory" subjects: English, arithmetic, drawing (boys), needlework (girls), lessons in geography, history and "common things," singing and physical training; (2) the class of subjects formerly called "specific," one or more of which is to be taught when the inspector deems it advisable: algebra, Euclid, mensuration, mechanics, chemistry, physics, animal physiology, hygiene, botany, agriculture, horticulture, navigation, Latin, French, Welsh (in Wales), German, book-keeping, shorthand, domestic economy, drawing (girls), needlework (boys); (3) special subjects, earning a separate grant: cookery, laundry, dairy, household management, cottage gardening, manual instruction.

The Higher Elementary Schools are for children from 10 to 15 years of age who are certified by the Inspector as qualified to profit by such instruction. "The special object which they have in view is to qualify the children taught in them to enter any of those callings in which scientific methods have to be employed." In 1903 there were 29 schools of this kind.

In the Schools for Older Scholars, seven "standards" are recognized, standards of examinations in reading, writing and arithmetic.

The method employed most commonly in the elementary schools of England is that of recitation of lessons prepared from a textbook. Oral instruction is seldom found to the extent that it is in Germany. The teaching is characterized by thoroughness, though this virtue sometimes brings in its train the kindred vice of rote-learning and mechanical teaching.

5. *Financial Support of the Schools.* Elementary Schools are supported from three sources of income, the government grant, fees of pupils, and the local rate. The government grant consists of principal grants and special grants, the former being paid on the basis of average attendance, the latter for the teaching of special subjects; a school in which cookery is taught, for instance, receives a special grant of 4 shillings per pupil in average attendance. The fees of pupils cannot exceed 9 pence per pupil per week. About 12% of the pupils in elementary schools now pay fees, though the Act of 1891 provides for a special grant to schools that remit fees.

The system of elementary education in England must be recognized as a wholly indigenous product. German, French, and American educational ideals have had little to do with the

shaping of English educational policy, a policy that embodies the religious, social, and political ideals of the English people to an extent difficult for an outsider to realize. The present crisis has brought the subject of education before the masses of the people as never before, and the mere discussion of the theme must result in some good. It would not be astonishing, however, if the next great advance should be due to the emphasis given to the connection between industrial prosperity and popular education, the theory which called the Mosely Commission into existence and which has inspired several recent books in the domain of economics.

The Bibliography which follows is not an exhaustive one, and includes only a few titles of controversial articles.

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THE QUESTION OF METHOD IN NATURE STUDY.

By Michael F. Guyer, University of Cincinnati.

The practical question of what material to use is the one which many teachers will say presents the greatest dfficulty in nature study. The writer is thoroughly convinced, however, that it is not so much a question of material as it is need of a practical method. Teachers who have become disheartened in the matter have done so largely because in first facing the question of material, they have overlooked the more fundamental one of method.

Any method, to be successful, must make the separate qualities of a given object stand out to the perception of the child and lead him to make his analysis and subsequent reconstruction in an orderly manner. The problem becomes all the more intricate if, as in the average city school, the teacher is dealing with large classes, for then the formula for analysis must be adapted to fit the weakling as well as the strong; it must be a method of making not only a particular pupil, but all, receive the successive emphasized impressions.

In the case of animals, for example, the first questions for the teacher to decide are, just what is there to see about animals? What can children be led to see?

What questions do children ask about animals? They would run about as follows: What does it do? How does it do it? What 's it good for? How does it work? In other words, a child is interested in structure only as applied to action. He wants to know the business of animals and how they attend to it.

It is true that an ordinary crawfish, in terms of structure, is an astacoid macruran decapod, but never mind that. What the child is interested in is that it eats, and what and how it eats. He soon learns that it can protect itself, as is evidenced by the wary way he goes about picking it up after being once nipped by its pincers. He sees, too, that it is adjusted to its physical surroundings, or in other words, that it is adapted to live largely in the water. He can perceive all of these things and more without even suspecting that it is an astacoid macruran decapod, and he will have made considerable advancement in nature study too.

The following simple outline is, I think, applicable in teach-

ing, from the primary school to the university, for it can be followed out in just as small or as great detail as is desirable. In actual practice it has worked very satisfactorily in a number of the Cincinnati public schools. It is based entirely upon what animals do.

Animals, from their own point of view, have two and only two occupations in the world. These are, (1) to care for themselves, and (2) to care for their offspring. Consequently, every important thing to be seen about an animal has to do with one or the other of these pursuits. This is as true of internal as of external structures; in the nature-study work, however, we confine our attention for the most part to external features.

For taking care of themselves, animals must possess organs (a) for procuring and transforming food, (b) for protecting themselves from enemies, and (c) for adapting themselves to surrounding physical conditions.

This outline will be more easily remembered if studied in tabular form:

THE BUSINESS OF ANIMALS.

I. To Care for Themselves.
   a. Food: finding, securing and transforming.
   b. Self-protection.
   c. Adjustment to physical surroundings.
II. To Care for their Offspring.

Thus, the fundamental structures of animals, or plants for that matter, are simply answers to the demands of their business as stipulated in this table. Differences in structure and habits, therefore, are due largely to different methods of meeting these necessities of life. A given organ, once established, frequently fulfills more than one of these functions, but the point is that these and only these occupations concern the animal.

Much of the machinery of any animal is connected with the prime necessity of obtaining food and drink. Unlike plants, animals do not have their food at hand in soil or air. They must seek for it. Thus have arisen the various types of legs, wings and other organs of locomotion. Organs of locomotion alone would be of little service to the animal, however, if it had nothing to direct them; there must be a centre of control and this is provided ordinarily in the central nervous system. The animal requires, moreover, some mechanism to give it knowledge of objects at a distance, hence have arisen such structures as eyes through which it receives information by means of light, ears for sound, a nose for odors, etc. These

organs may serve more than one purpose, of course, when once established. They are, for example, as necessary to herbivorous animals for escape from being made food of as to aid them in finding their own food.

When an animal once confronts its food, however, it must still meet the difficulty of getting it into its body. The food is solid, perhaps, and must be subdivided, or it is alive and must be killed before the animal can use it. There must be some organ or organs, therefore, such as mouth, trunk, claws, hands or the like to serve in this capacity, and still modifications of these organs or additional organs to grind or cut the food into small bits that it may be passed on into the body to be digested. Such organs range from the commonplace to the grotesque and their nature depends very largely upon the character of the food; it requires different machinery for killing and rending flesh from that which must serve for plucking grass or for grinding grain.

Before leaving the subject of food it should be mentioned that such structures as those for breathing and for the circulation of the blood are concerned with nutrition no less certainly than the more evident organs of alimentation. The blood distributes digested food to where it is needed in the different parts of the body, and oxygen, which is obtained by breathing, must be present before the food can be used by the tissues. With very young pupils it would not be desirable, of course, to attempt to lead out the more intricate topics of digestion or of other physiological functions. It should be noted, however, that the whole question of digestion, circulation, etc., can be brought out in a very interesting manner for students of physiology by such an interpretative method. The emphatically important thing, whether in nature-study or physiology, is that the interpretation be made by the child, not by the teacher. The latter should simply guide by means of relevant questions.

It is needless to take the space for a detailed discussion of self-protection and the remaining subjects of the synopsis, because the many simple interpretations along these lines which children may be led to make, are obvious. It may not be amiss, however, to indicate briefly a few of the more general topics.

In defending themselves, some animals, of course, frequently make use of the same weapons as serve them in securing their food. Such structures, on the other hand, as the armor of the turtle or of the armadillo, or the barbed spines of the porcupine, are instances of organs more exclusively protective in nature. Besides the many obvious examples of armor, of fleetness or of strength which serve to protect various animals, much of the color observable would come under the heading of protection from enemies.

Many of the most evident adaptations of animals are concerned, perhaps, with adjustment to physical surroundings such as, for example, the element in which the animal dwells. Thus, animals such as fishes, which live in water, must have mechanisms for breathing or for locomotion necessarily very different from those which are terrestrial in habit. Again, flying forms require a type of propelling organs different from that of forms which walk upon the surface of the earth. It is this necessity for physical adjustment, furthermore, that gives rise in cold climates, to the furs, fleeces and downs to be met with in such profusion. Not only structure, indeed, but habits as well, vary under different climatic conditions. The hibernation practiced by some animals is a good example of adjustment to climate by means of habit. It will be found that many structures which may be looked upon as coming under the heading of adjustment to physical surroundings, may also be considered from another aspect under the topic of food.

As examples of adaptations to meet the second business of animals, viz., caring for offspring, may be mentioned the diverse types of cocoons, nests or pouches for housing the newborn, the manifold provisions for feeding the young, and various signals to attract their attention.

Before leaving the synopsis, I wish to indicate, under each of the headings, a number of general questions which will be serviceable in bringing out systematically the various phases of animal life or structure. The questions are comparatively few in number and so simple that a novice can determine answers with some degree of satisfaction, and yet, if one learns the complete answers to them he knows practically all about a given animal that the trained naturalist can ascertain.

The Business of an Animal.

1. To care for self.

a. *Food.*

1. What does it eat? Special preferences?
2. How does it get information about its food, *i. e.*, what senses has it? How do they serve it? Are they advantageously located for the work they have to perform?
3. How does it get to its food (*i. e.*, how fitted for locomotion)?
4. What organs are helpful to it in eating? How are they adapted to its particular kind of food?
5. Does it snare or lure its prey? Is its color ever of advantage in securing food?
6. Does it lay up a store of food, or merely eat what it needs each day?
7. Does it work during the day or night?
8. How does it breathe?
9. (Digestion, circulation, etc.,—to be omitted for young children.)
10. Do its food habits make it a friend or an enemy of man?

Cf., also b, 4.

b. *Self-protection.*

1. What are its enemies and how does it escape them (weapons, armor, flight, etc.)?

2. Can its color or general appearance help it to escape in any way? Has it any means of signalling to its own kind? If so, does such ability protect it in any way?

3. Has it a home or regular place of resort?

4. Does it lead a solitary life, live in a community of its own kind, or live with unrelated forms? If colonial, and if there is division of labor in the colony, what part does each member perform? Differences of the various members in structure and habits?

5. To what diseases is it subject? Can it convey these or other diseases to man?

c. *Adjustment to Physical Surroundings.*

1. Where does it live (geographical locality; ground; water; leaves, roots, or stems of plants; etc.)?

2. How is it fitted in general form and in the special conformation of its organs to its place of abode? *Cf.*, Locomotion and Sensation, 2 and 3 under 1, a.

3. How is it protected against extremes of temperature, moisture or drought? Where does it go in winter? In foul weather?

II. TO CARE FOR OFFSPRING.

1. Is the animal an egg-laying form or are the young born alive? If an egg-laying form, where and how does it deposit its eggs?

2. How are the young nourished? What provision is made for their safety? To what extent are they taught by their parents? *Cf.*, also 3 and 4 under 1, b.

3. How long does the animal live? What length of time are the young in maturing?

4. Do the young undergo a pronounced change in form (metamorphosis) while developing into the adult, or do they principally increase in size?

5. Is there rivalry for mates (battle, song, parade of cleverness or of color)?

6. (What changes have come about during the ancestry of the race? Were they advantageous? *To be omitted for children.*)

Plants.

As regards plants, it is evident that the same general synopsis will answer, for the business of plants is the same as that of animals. While the *same problems* confront plants, the solutions of these problems are largely by *different processes.*

The Business of Plants.

I. TO CARE FOR THEMSELVES.

a. *Food.* Most plants (*e. g.*, tree) get food from the air (hence leaves) and earth (hence roots); consequently the adaptations of plants must differ from those of animals.

1. No organs of *locomotion* ordinarily, because food surrounds plant.

2. No organs of *special sense* (eyes, ears, etc.) because it is unnecessary for plants to get information of objects at a distance.

3. Besides getting food-products, the green plant must make

its own food, hence the presence of special machinery ("leaf-green") and devices for arrangement of the same.

4. Remaining topics (respiration, etc.) noted under animals apply to plants.

5. Plants, not green, nourished largely by organic foods.

6. Insectivorous plants capture insects, etc., for food, apparently.

b. *Self-protection.* Not active opposition or flight as in many animals, but *passive defense* against,

1. Attacks of animals or other plants. Met by
   —Distasteful or poisonous substances.
   —Armor (prickles, spines, thorns, hairs, etc.).
   —Mimicry, possibly in a few.
   —Utilization of allies such as insects, etc.
2. Too much or too little water.
3. Too much or too little light.
4. Extremes of temperature.
5. Breaking by wind, water, etc.
6. Poisons in soil.
7. Competitors for favorable position. (The plant is often aided in this struggle by the possession of long roots, ability to grow in shade, etc.)

c. *Adjustment to Physical Surroundings.*

1. Advantage of greater absorbing surface in vast number of flattened organs (foliage leaves), rather than solid compact top.
2. Similar advantage to plant in having many branched roots instead of a single one for absorption and as a hold-fast.
3. The *light relation* is especially important, since without sunlight green plants are unable to construct food from the gases of the atmosphere and the substances in plant sap. Methods of growth, therefore, are largely to enable plants to get best position with reference to light to do life-work.
   (a) *Plant stems.* Two principal methods of development.
      (1) Predominant plants of a region avoid too great shading by elongation of stem=*forest* as extreme type.
         Climbing and twining plants,
      (2) Predominant plants, short-stemmed forms which crowd each other beneath the soil=*prairie* as extreme type.
         (Two "societies"—overgrowth and undergrowth—frequently inhabit the same region).
   (b) *Arrangement of leaves.* Mat or carpet habits; leaf mosaics; rosettes; shape of leaves as modified by relation to one another on tracts; size of leaf with reference to illumination, etc.
4. Other adjustments must be to heat, the pull of gravity, mechanical forces (as air and water), moisture, soil, electricity, etc., other phases of which have been included under the heading of self-protection.

II. TO CARE FOR OFFSPRING.

a. *Propagation.* Seed, slips, runners, etc.
b. *Protection.* Burrs, nuts, green fruit, etc.
c. *Storage of food.*
d. *Provisions for distribution of seed or spores.*
   1. By animals (fruits, burrs, hooks, nuts, etc.).
   2. By wind (floats, wings, tumble-weed, etc.).
   3. By water.

4. Other devices (plants which shoot off spores or seed, self-propelling devices, etc.).

Finally, if the parallel between the business of plants and the business of animals is pursued still farther, it will be apparent that almost all of the questions indicated on pages 89 and 90 for the study of animal life are equally applicable to plant life.

CHILD STUDY AT CLARK UNIVERSITY.

By Theodate L. Smith.

In January, 1903, a short article by Dr. G. Stanley Hall appeared in the *American Journal of Psychology* giving a list of the topical syllabi issued by Clark University since the beginning of the child study movement in 1894, and also a list of published books and studies, sixty-four in number, based wholly or in part on these syllabi. A plan for the extension of child study by securing the co-operation of institutions and individuals interested in child study both in the United States and other countries was announced, and this is being gradually realized. The record of the work already accomplished in this line since the publication of the above plans is encouraging. Over seventy promises of co-operation, domestic and foreign, were received in answer to a circular letter sent out by Dr. Hall and many of these have been most generously fulfilled. A larger amount of material has been collected by the questionnaire method than has hitherto been possible and the quality of the data has been of a high order. Through the co-operation of teachers excellent material has been gathered directly from children and this has been supplemented by observation, reminiscence and introspection, by pupils in normal schools and colleges and by teachers. England, through Miss Chevallier of the British Child Study Association, and Miss Young of the Home and Colonial College, has contributed valuable data to the University. Madame Grudzinska, of Poland, has collected and translated data which would otherwise have been quite inaccessible and has also translated into Polish a number of Clark University child study publications. Japan has entered into the movement, and Professor Motora, of the Imperial University at Tokyo, has already collected data for the University, and we hope, in time, to have many valuable contributions from that country. Italy has just sent to us, through Professor Maestrini, the names of seventy Italian educators who have enrolled themselves as co-operators in the new movement for international co-operation. Several of the Clark University syllabi have been printed in the best Italian educational magazines and answers to these are promised next June. Italy has already made extensive contributions to child study, the most important contributions being in the field of criminology and

defective children. The names of Mosso, Mantegazza, Vitali, Marro and Ferriani and Paola Lombroso are familiar to all interested in child study, and if to these the names of Italian anthropological investigators should be added, the list would grow beyond the limits of the present article.

A list of the syllabi issued and of the studies based wholly or in part on questionnaire material since March, 1903, is appended to this article, thus bringing the previous list of sixty-four books and articles up to date. But these by no means represent all of the work accomplished. Experimental studies along lines not suited to the questionnaire method have been carried on and several are still in progress. Several studies in individual psychology have been made by those connected with the University, and the growing interest in child study all over the country is manifested by the number of letters received by the department on individual problems and from child study clubs formed by mothers and teachers. Several of these have asked to work under University direction and it has been a part of the work done by the department to furnish suggestions and selected bibliographies on various subjects to those who have asked for them. Some of these have already collected data for the University and, at the present time, a series of experimental tests are being systematically carried out in New York City, under University direction, by a kindergarten club of twenty-five teachers and the teachers of a high school gymnasium which has two thousand pupils. In time these clubs will doubtless become a source for the collection of data which will be of great value to the University.

There is also published annually in the *Pedagogical Seminary* a bibliography of child study which the compiler, Mr. Louis N. Wilson, Librarian of the University, spares no effort to make as complete and helpful as possible.

It is not yet a decade since the advocate of child study found it difficult to obtain a hearing in scientific circles, yet at the present time it is recognized as an important branch of psychology in our leading colleges and universities. Out of twenty-seven leading colleges and universities from which replies have already been received in reply to a request for information in regard to child study in the curriculum, there are but two who do not include child study, either as a separate course or as an important part of psychology and education. Some of the larger universities report three or four separate courses. The publication of Dr. Hall's "Adolescence" has given the subject a fresh impetus and in one of the universities which have thus far reported, it is being used as a text book, and in practically all of the higher grade of normal schools, child study is a fundamental requisite. The recognition of Clark University

as the leader in child-study research comes with ever increasing frequency from foreign countries. At the time of writing, a letter has just been received from a professor of pedagogy in Bulgaria, asking help and information. Such facts as these give the greatest encouragement for the future of child study, which, though it does not yet lay claim to being a science, is learning through the mistakes inevitable in pioneer work and steadily becoming more scientific.

A. List of Topical Syllabi Issued Since March, 1903.[1]

103. Curiosity and interest, Theodate L. Smith, May, 1903.
104. Stages of religious development, Jean du Buy, May, 1903.
105. Birds and animals, G. Stanley Hall, Oct., 1903.
106. Precocity and tardiness of development, G. Stanley Hall, Oct., 1903.
107. Differences between young and old teachers, G. Stanley Hall, Oct., 1903.
108. Predominance of female teachers, G. Stanley Hall, Oct., 1903.
109. Dreams, G. Stanley Hall, Oct., 1903.
110. Leadership and its opposite, G. Stanley Hall, Oct., 1903.
111. Advertising, G. Stanley Hall, Oct., 1903.
112. Stages of religious development, Jean du Buy, Nov., 1903.
113. Nervous children, T. Kuma, Nov., 1903.
114. Young people's Christian organizations, J. N. Rodeheaver, Nov., 1903.
115. The hygienic condition of normal schools, Wm. H. Burnham, Dec., 1903.
116. A study in the pedagogy of missions, Frank A. Lombard, Nov., 1903.
117. A study in the pedagogy of missions (Japan), Frank A. Lombard, Nov., 1903.
118. The language interest in children (I and II), A. W. Trettien, Dec., 1903.
119. Attention, Alfred A. Cleveland, Dec., 1903.
120. Reaction of pupils to high school work, William F. Book, Jan., 1904.
121. Questions for members of young people's societies, Wm. B. Forbush and J. N. Rodeheaver, Feb., 1904.
122. Crying, G. Stanley Hall, Feb., 1904.
123. Defects in school education, M. W. Meyerhardt, Feb., 1904.
124. Obstinacy, stubbornness and obedience, G. Stanley Hall, Feb., 1904.
125. Information blank on stuttering and other speech defects, Edward Conradi, March, 1904.
126. Keeping well, G. Stanley Hall, March, 1904.
127. The subnormal or supernormal child, G. Stanley Hall and T. Kuma, May, 1904.
128. Psychic reactions to sound, Theodate L. Smith, Nov., 1904.
129. The development of the imagination (I and II), H. L. Brittain, Jan., 1905.
130. The teaching of geography, G. Stanley Hall and David Gibbs, Feb., 1905.
131. The psychology of clothes, G. Stanley Hall, Feb., 1905.

[1] For Nos. 1-102 see *Am. Jour. of Psy.*, Jan., 1903, Vol. 14, pp. 97-100.

B. Published Articles based wholly or in part on Preceding Syllabi, the Numbers following those of the Latter.

60. G. Stanley Hall and Chas. E. Browne. Children's Ideas of Fire, Heat, Frost and Cold. *Ped. Sem.*, March, 1903, Vol. 10, pp. 27-85.
89. Edward Conradi. Children's Interests in Words, Slang, Stories, etc. *Ped. Sem.*, Sept., 1903, Vol. 10, pp. 359-404.
93. W. Fowler Bucke. Cynopsychoses. *Ped. Sem.*, Dec., 1903, Vol. 10, pp. 459-513.
93. G. Stanley Hall and Chas. E. Browne. The Cat and the Child. *Ped. Sem.*, March, 1904, Vol. 11, pp. 3-29.
98. Lonna D. Arnett. The Soul; A Study of Present and Past Beliefs. *Am. Jour. of Psy.*, April and July, 1904, Vol. 15, pp. 121-200; 347-382.
100. Sanford Bell. An Introductory Study to the Psychology of Food. *Ped. Sem.*, March, 1904, Vol. 11, pp. 51-90.
102 and 14. Theodate L. Smith. Types of Adolescent Affection. *Ped. Sem.*, June, 1904, Vol. 11, pp. 178-203.
102. G. Stanley Hall and Theodate L. Smith. Showing off and Bashfulness as Phases of Self Consciousness. *Ped. Sem.*, June, 1903, Vol. 10, pp. 159-199.
103. G. Stanley Hall and Theodate L. Smith. Curiosity and Interest. *Ped. Sem.*, Sept., 1903, Vol. 10, pp. 315-358.
105. Theodate L. Smith. Psychology of Day Dreams. *Am. Jour. of Psy.*, Oct., 1904, Vol. 15, pp. 465-488.
110. Lewis M. Terman. A Preliminary Study in the Psychology and Pedagogy of Leadership. *Ped. Sem.*, Dec., 1904, Vol. 11, pp. 413-451.
115. Wm. H. Burnham. A Contribution to the Hygiene of Teaching. *Ped. Sem.*, Dec., 1904, Vol. 11, pp. 488-497.
116. Frank Alanson Lombard. Notes upon a Study of the Pedagogy of Missions. *Am. Jour. of Religious Psychology and Education*, Nov., 1904, Vol. 1, pp. 113-128.
118. A. W. Trettien. Psychology of the Language Interest in Children. *Ped. Sem.*, June, 1904, Vol, 11, pp. 113-177.
120. William F. Book. Why Pupils Drop out of the High School. *Fed. Sem.*, June, 1904, Vol. 11, pp. 204-232.
124. Theodate L. Smith. Obstinacy and Obedience. A study in the psychology and pedagogy of the will. *Ped. Sem.*, March, 1905, Vol. 12, pp. 27-54.
125. Edward Conradi. Psychology and Pathology of Speech Development in the Child. *Ped. Sem.*, Sept., 1904, Vol. 11, pp. 328-380.

A BIBLIOGRAPHY OF CHILD STUDY IN POLAND.

By Anna Grudzinska.

The Polish movement in child study was inaugurated by the now venerable psychologist, Vladyslaw David, a man of high philosophical training and a well known pedagogist. His contributions to child study are:

Vl. David. Programme of Psychological Observations on a Child from the First Day to the Twentieth Year. Warsaw, 1887.

—— The Contents of Children's Minds. Warsaw, 1895.

This book is based on a questionnaire of 136 questions answered by 476 Warsaw children, after the method of Berthold Hartmann.

These publications were the first step in child study and two of Prof. David's assistants, Miss A. Szyc and Miss Iz. Moszczénska have since then become independent workers. Following the publication of Prof. David's book, Miss Szyc gathered material from 500 Warsaw children by means of a questionnaire of 55 questions based upon those of Prof. David, the results of which she published in book form.

A. Szyc. *Books.* Development of the Child's Mind. Warsaw, 1899.

—— How to Study Children's Minds. Warsaw, 1900 (2d ed.).

—— Articles on Child Study: On Methods and Problems of Child Psychology. Lemberg, 1901, 2d ed. Warsaw, 1904.

—— *Articles.* How do Children Relate? 1890.

—— Remarks on Little Children, 1891.

—— Types of Imagination, 1893.

—— Abstraction in Life and Education.
(Abstracted and shortened from. *Ped. Sem.*)

—— Plays.
Curiosity and interest, G. Stanley Hall and Theodate L. Smith.

—— *Studies.* What Interests Children Most? 1893.

—— What would you do with a rouble? 1893.

—— What would you like to be when grown up? 1898.

—— Development of Children's Moral Notions.

—— Curiosity of Polish Children.

—— *Studies now in progress.* Child Psychology during School Time for 1905.

—— Questionary on Mental Interests.

—— Study of Flowers.

Iz. Moszczénska.
Translation.
Sully, James, Children's Ways. Miss Moszczénska also writes articles on the psychology and pedagogy of children and adolescents which are greatly valued.

S. Blazck. School Fatigue. Lemberg, 1899.

K. Król. (Editor of the Pedagogical Review at Warsaw.)
Translations.
Tracy, Frederick, Psychology of Childhood.
G. Stanley Hall. Child Study and its Relation to Education. Forum, Aug., 1900.
—— Child Study: The Basis of Exact Education. Forum, Dec., 1893. (Translated from the German of Stimpfl, in Internationale Bibliothek, 1902.)

K. Król and Iz. Moszczénska.
Translations.
Lombrosa, Paola: Vita dei Bambini.
Queyrat, F. La logique chez l'enfant et sa culture, 1902.
Raaf, H. Elementary Psychology.

Anna Grudzínska and K. Król.
Translation. (1904.)
Lancaster, Ellsworth G. The Psychology and Pedagogy of Adolescence. *Ped. Sem.*, July, 1897, Vol. V.

Anna Grudzínska. The following studies translated and shortened. (1904.)
Monroe, Will S. The Money Sense of Children. *Ped Sem.*, March, 1899, Vol. VI.
Sears, Charles H. Home and School Punishments. *Ped Sem.*, March, 1899, Vol. VI.
Eby, Frederick. The Reconstruction of the Kindergarten. *Ped. Sem.*, July, 1900, Vol. IV.
Dolbear, Katherine E. A few Suggestions for the Education of Women. *Ped Sem.*, Dec., 1901, Vol. VIII.
G. Stanley Hall and Theodate L. Smith.
Reactions to Light and Darkness. *Am. Jour. of Psy.*, Jan., 1903, Vol. XIV.
—— Showing off and Bashfulness as Phases of Self Consciousness. *Ped. Sem.*, June, 1903, Vol. X.
—— Fecundity of College Men and Women. *Ped. Sem.*, Sept., 1903, Vol. X.
Theodate L. Smith. Types of Adolescent Affection. *Ped. Sem.*, June, 1904, Vol. XI.
—— Psychology of Day dreams. *Am Jour. of Psy.*, Oct., 1904, Vol. XV.

The translation of Adolescence, by G. Stanley Hall, is also in progress by Anna Grudzínska and the preface and chapter i are already in the printer's hands. Its appearance is eagerly looked for in the scientific circles of Poland.

Two of the best known pedagogists of Poland, now at Warsaw, F. Laganowski and Waldemar Osperloff, have gathered much valuable material which is not yet published.

LITERATURE.

Bericht über den I. Internationalen Kongress für Schulhygiene. 4 Vols. Nürnberg, 1904.

This Report, in four large volumes of more than 500 pages each, contains the proceedings of the largest and most eminent body of hygienists ever gathered to consider the special subject of school hygiene. The president of the Congress was Dr. Griesbach of Mülhausen, and the general secretary, Dr. Schubert of Nuremberg. 1,582 persons participated in the Congress, although not all these were present. Of this number 1,247 were members. While about half of these were from Germany, the international character of the Congress is shown by the distribution of the other half. They represent some 24 different countries from Chili, Uruguay, and Cuba, to Japan and the more distant parts of Russia, with members from Tiflis, Tomsk and Nischnij-Nowgorod. The papers were in three different languages,—German, French and English; and a total of over 170 addresses and papers are included in the Report besides the proceedings of the business meetings and reports of the opening exercises.

The United States was represented on the permanent International Committee by Dr. Bergström, of the University of Indiana, President Nicholas Murray Butler, of Columbia, Dr. Porter of Harvard, and President G. Stanley Hall, of Clark, and by nine members in the Congress (although apparently none of these were present). Contributions to the proceedings of the Congress were made by Prof. Dexter, of the University of Illinois, on "The Influence of the Weather upon the Child;" by Dr. Risley, of Philadelphia, on "The Importance of Examinations in the Development of School Hyiene;" and by the reviewer, on "A Contribution to the Hygiene of Teaching."[1]

The scope of the papers illustrates very well the wide expansion of the field of school hygiene in recent years. Only about one-eighth of the time of the Congress was taken up with matters relating to school hygiene in the narrower sense,—school organization, heating, ventilation, and the like. The larger part of the Report is filled with papers on school diseases, the hygiene of instruction, the hygiene of the school child, the hygiene of the teacher, and the like. The methods of modern school hygiene are also illustrated by the papers and reports of this Congress. Perhaps a score present the results of original experimental or statistical investigation,—studies of growth, disease, defect, etc., and of fatigue and other matters relating to the hygiene of instruction.

Three general sessions of the Congress were held, and among the scientific papers presented were one by the veteran ophthalmologist, Dr. Cohn, of Breslau, "The Contributions of Oculists to School Hygiene;" one by Dr. Sickinger, of Mannheim, "The Organization of Large People's Schools According to the Natural Capacity of Children;" and one by Dr. Kerr, of London, on "School Ventilation." The greater part of the papers, however, were presented at department meetings. The Congress was divided into groups as follows:

Group A, concerned with school buildings, school sanitation, and

[1] See *Ped. Sem.*, December, 1904.

the like, in which were presented papers by such eminent specialists as Dr. Erismann, of Zurich, Prof. Nussbaum, Dr. Hinträger, and others.

Group B discussed the hygiene of boarding schools, methods in school hygiene, and the hygienic of instruction. Such subjects as Co-education, by Dr. Hertel, of Copenhagen; The advantages of One Session for School Instruction, by Hintzmann, Schuyten and Semerád; Over-pressure, by Hergel; Fatigue and Methods of Studying Fatigue, by Sakaki, of Japan, Vannod, of Bern, Adsersen, of Copenhagen, and Altschul, of Prague; "The Necessity of an Experimental Didactic and of Laboratories for Child Study" by Lay, were among the noteworthy topics of important papers.

Group C discussed the hygienic instruction of teachers and pupils. Methods employed in different places were described, and among other papers presented were several on "Sexual Hygiene;" one by Dr. Gutzmann on "The Significance of Voice Hygiene for Teachers and Pupils;" and one on charts and other apparatus for hygienic instruction in the school.

Group D was devoted exclusively to physical education. The breadth of treatment is suggested by the following subjects that were presented: school baths; instruction in swimming; gymnastics and play; organization of physical education in the schools; strength exercises from the point of view of hygiene; physical work as an educational activity; the Olympic movement and the school; hygiene of gymnastics for girls; the physical and mental development of the child during the first school year; breathing gymnastics; correct breathing in the school; vital capacity of students; physical education of youth in Switzerland, in Austria, in Croatia and Slavonia, and in Germany.

Group E was devoted to disease and medical inspection in the schools. Among the concrete subjects discussed were the following: morbidity statistics; the causes of nervousness among school children; the significance of the psychology of development for school hygiene; and there were several papers relating to medical inspection, and a number dealing with sight, hearing, the teeth, diseases of the nose and naso-pharynx, tests of vision, injuries to vision during school life; Stilling's theory of myopia; school and astigmatism; and papers relating to scoliosis, and infectious diseases.

Group F was devoted to special schools and here were presented important papers by Gutzmann on "The Influence of the School on Speech Defects;" by Shuttleworth on "The Educational Treatment of Epileptic Children," together with several other papers relating to epileptics; and the important reports of Sickinger and Dr. Moses on "The Special Class System of the Mannheim People's School."

Group G was devoted to the hygiene of pupils outside the school and the hygiene of teachers. Noteworthy here were several papers on the subject of home work, and papers relating to the hygiene of teaching by Wichmann and others; and also such questions as smoking and the use of alcohol were discussed. Here, as in all the departments, perhaps, almost every paper deserves mention. Those noted above are samples.

Sir Lauder Brunton, of London, was elected president of the next Congress, which is to be held in London in 1907.

WM. H. BURNHAM.

Personal and Ideal Elements in Education, By HENRY CHURCHILL KING. The Macmillan Co., New York, 1904. pp. 277.

The author here brings together in an interesting and stimulating way the results of his own educational studies. His chief topics are

the primacy of the person in college education, the fundamental nature of religion, religious training as conditioned by modern psychology and pedagogy, the revival, its dangers, needs, how to make a rational fight for character. On the whole it is a fresh stimulating book to which no brief review can do adequate justice.

Story of the Bible told for Young and Old, by REV. JESSE LYMAN HURLBUT. J. C. Winston Co., 1904. 168 stories. pp. 750.

This volume is the most interesting and attractive collection of Bible stories known to the reviewer. The selections are made with great care and discretion. The picture illustrations are many and also well chosen, and besides meeting the great and growing need of the Bible content put in simple form for Sunday School and home, it is positively interesting reading for the natural man. This is saying much in these days when the youth of our land are in a state of progressive ignorance of the Bible and where in many public and in some Sunday schools the stories of the Grail and other Wagner themes are more familiar than those of Scripture.

The Color Line. A Brief in Behalf of the Unborn. By WILLIAM BENJAMIN SMITH. McClure, Phillips & Co., New York, 1905. pp. 261.

Education is clearly not a cure for the ills of the negro question. The coddling of the North has not effaced a single racial trait nor raised by one notch the average character of the best part of the race who have been most exposed to it. Criminality, according to these statistics, has increased. The black race is too inferior to receive our civilization, and it can only be imposed upon them from without. The negroid inferiority, which fills a chapter, is argued at length. The awful danger of contamination with negro blood must be avoided at all hazards. Mongrelism would mark the twilight of the nation for there is enough negro blood here to sink our race. The lower race always dies out in the end and this will be the case. The negro will disappear by natural causes.

The Fourth Yearbook of the National Society for the Scientific Study of Education. Edited by Manfield J. Holmes. Part I. The Education and Training of Secondary Teachers, by E. C. Elliot, E. G. Dexter, M. J. Holmes, and others. University of Chicago Press, Chicago, 1905. pp. 117.

The various chapters of this little book describe first the genesis of the secondary schools and their relation to the life of the people, the ideal secondary teacher, the present status and personnel of the secondary teaching force in this country, provisions for their training, and the relative advantages and limitations of universities and normal schools in preparing secondary teachers. The latter problem is a vital one and in many opinions quoted there is much unanimity on the part of college teachers that they can do best for the secondary teacher, but in general this form of education is at present unsatisfactory.

Feuerbestattung? oder Erdbegräbnis? Wie sollen wir unsere Toten bestatten? (T. Voelkel, Ph. D.) Feuerbestattungs-Verein der Vereinigten Staaten von Amerika, 1904. Chas. H. Schaller, Printer, Brooklyn. pp. 30.

This interesting little pamphlet sums up the arguments in favor of cremation, gives the addresses of forty-two secretaries or heads of cremation institutes in different lands, prints another list of the more important crematories in the order in which they were developed, the

first two being in Milan and in Washington, Pa., in 1876. From 1887 to 1897 they increased in number more than they had before or since. The physiological and economic arguments are set forth with great detail and the sentimental aspect of the subject is also treated with seriousness.

Pedagogues and Parents, by ELLA CALISTA WILSON. Henry Holt & Co., New York, 1904. pp. 290.

This book is addressed to parents and is a comment on present education methods and situations for their benefit. The writer has great scorn for the ordinary current pedagogy and has certainly written a vivacious book. She can hardly be said to have a very definite doctrine. She dislikes Brahminical Boston because childhood needs enthusiasm, is a great admirer, however, of Colonel Parker and the Quincy method. The N. E. A., which has predicted great change and improvement, has not yet seen its splendid visions realized. Uniformity of President Eliot and the diversity of Professor Search are contrasted in favor of the latter. Individuality is perhaps the author's fondest word, and schools jeopardize this. Large things, letters, objects, topics, and not little ones is what we want. The author finds great fault with the teaching of arithmetic and morality which ought to be the end of all, and realizes that the school is for the sake of the child and not *vice versa*.

Education of the Wage-Earners, by THOMAS DAVIDSON. Edited with introductory chapter by Charles M. Blakewell. Ginn & Co., Boston, 1904. pp. 247.

This is a charming volume describing the work of the philosopher and philologist, Thomas Davidson, on the east side of New York among the lowly and often rather ignorant working people. Here he inaugurated and directed up to the time of his death, in September, 1900, a unique and it would appear experimental work, and showed that a philosopher of his somewhat transcendent type could be very practical.

The Distribution of Wealth, by THOMAS NIXON CARVER. The Macmillan Co., New York, 1904. pp. 290.

Economics as the study of man's actions in the ordinary business of life, viz., getting a living, is a topic of perennial and now very rapidly growing interest. The seven chapters that constitute this work are devoted to some of its cardinal themes, viz., value, diminishing returns, the forms of wealth, income, wages, rent, interest, and profits.

A Short History of England, by EDWARD P. CHEYNEY. Ginn & Co., Boston, 1904. pp. 695.

In this attractive book the story of England is told with copious illustrations from prehistoric times down to the death of Queen Victoria. Abundant maps, and many cuts of portraits, notable scenes, buildings, etc., are found.

The Tenth Annual Report of the British Child-Study Association. London Branch. 1904–05. Wm. Newbold, London, 1904. pp. 16.

We congratulate the members of this association on the remarkable progress not only in numbers but in the quality of their membership. In the energy and effectiveness of the organization those interested in this subject on this side of the Atlantic have very much to learn from what has been done here.

Elements of Botany, by JOSEPH Y. BERGEN. Revised Edition. Ginn & Co., Boston, 1904. pp. 283.

Bergen's Botany has long been one of the standard introductory

text books to the subject. It has here been revised and somewhat amplified.

The Teaching of Biology in the Secondary School, by FRANCIS E. LLOYD and MAURICE A. BIGELOW. (American Teachers' Series.) Longmans, Green & Co., New York, 1904. pp. 491.

The first part of this book is devoted to the pedagogy of botany in secondary education and discusses the principles determining the content of such a course, its various types, use of method, the laboratory, literature, etc. The second part treats zoölogy, including human physiology, in a somewhat similar way. As a whole the work is much stronger in method than matter and to our thinking the discussions are tedious and abstract. There are methods of teaching which deaden the interest of the pupil. There are normal methods that are calculated to deaden that of the teacher. Hyper-methodism to our thinking pervades the whole book. There are many references to books by title to which nothing in the text has any apparent relation.

Our Schools: Their Administration and Supervision, by WILLIAM ESTABROOK CHANCELLOR. D. C. Heath & Co., Boston, 1904. pp. 434.

The author has had excellent experience as a superintendent and has laid to heart the lessons of experience as well as those of literature. The chief topics treated are the school system, the board of education, administration by board, superintendent and principal, the functions of each of these three, supervision, the graded public school, the state system, the district, and the private school, the class teacher, the new educational course of study, the educational policy of the community, getting into office, salary, tenure, certificate, ages in the grades, etc. There are many valuable appendixes covering some fifty pages and no less than fifty important practical topics are briefly treated.

Moral Education, by EDWARD HOWARD GRIGGS. B. W. Huebsch, New York, 1904. pp. 330.

This is, we believe, the third, and it is certainly the best, of the volumes of this delightful lecturer. The topics here included are many, chief among which are the child, world, unity of life, and uniqueness of each person, growth, moral evolution and culture, types of character, and activity, moral training, work, play, environment, art, nature, social atmosphere, the principles of government in home and school, applied democracy, corrective discipline, personal influence, especially parents and teachers, and teaching ethics directly and by example, also history, mythology, folk-lore, literature, the relations of moral to religious education. A valuable descriptive bibliography of some twenty-five pages is appended.

Little Folks of Many Lands, by LULU MAUDE CHANCE. Ginn & Co., Boston, 1904. pp. 111.

This is another little and rather modest effort to introduce rudimentary anthropology into the schools. We have here a chapter each on an Indian, Holland, Philippine and Japanese girl, and upon an Eskimo, an African, and Arabian boy. The illustrations are copious although to our mind many of them might have been somewhat better chosen.

Famous Men of Greece, pp. 265; *Famous Men of Rome*, pp. 269; *Famous Men of the Midle Ages*, pp. 272; by JOHN H. HAAREN and A. B. POLAND. University Publishing Co., Boston, 1904.

This little series is a very attractive one both in form and content. It is based upon the sound idea that biography is the best form in pre-

senting history to children. The type is large and plain, the paper and binding excellent. All are illustrated by many very well chosen cuts. While all are excellent we are inclined to give the palm to the third book in the series on the Famous Men of the Middle Ages.

Out of the Northland. Stories from the Northern Myths. By EMILIE KIP BAKER. The Macmillan Co., New York, 1904. pp. 165.

This is a capital little book, small, inexpensive, concise, and gives the story root of the whole Norse mythology, often called the German Bible. It is something which every child should almost know by heart.

Sir Thomas Moore's Utopia. Edited, with introduction and notes, by J. Churton Collins. Clarendon Press, Oxford, 1904. pp. 283.

Moore's Utopia ranks in celebrity with "Pilgrim's Progress," "Robinson Crusoe," and "Gulliver." It is closely bound up with the personal life of its author and with the social and political movements of his day. The text is from the first edition, the antique spelling of which makes it a little confusing to read. The notes, however, and the glossary, covering 128 pages, abundantly make up for this. An introduction, too, of 50 pages, gives the life of its author, the framework, model, plot, and purpose, together with the origin and inspiration of the Utopia.

How to Keep Well, by ALBERT F. BLAISDELL. Ginn & Co., Boston, 1904. Revised Edition. pp. 265.

This little primer of practical physiology, which is here thoroughly revised, will no doubt seem to some coarse and its dogmas too schematic, etc. Nevertheless, we believe it has a place as a primer.

Elements of Plane Geometry, by CHARLES N. SCHMALL and SAMUEL M. SHACK. D. Van Nostrand Co., New York, 1904. pp. 233.

This book seeks to present the elements of plane geometry in a compact form commensurate with recent progress in the subject. Special attention is given to brevity, simplicity, grading, absence of ambiguity, terms, proofs stated so that they cannot be memorized, interlocking relations between the problems, etc.

Eighteenth Annual Report of the Commissioner of Labor, 1903. Cost of Living and Retail Prices of Food. Government Printing Office, Washington, 1904. pp. 865.

The Adventures of Pinocchio, by C. COLLODI. Translated by Walter S. Cramp. Ginn & Co., Boston, 1904. pp. 212.

Goethes Hermann und Dorothea. Edited by Philip Schuyler Allen. Ginn & Co., Boston, 1904. pp. 257.

Elementary Woodworking, by EDWIN W. FOSTER. Ginn & Co., Boston, 1903. pp. 133.

Grammar School Arithmetic, by DAVID EUGENE SMITH. Ginn & Co., Boston, 1904. pp. 394.

The Function of the Department of Education in Southern Universities, by EDWARD F. BUCHNER. Hackney & Moale Co., Ashville, N. C., pp. 12.

The Sonnets of Shakespeare, with an introduction and notes, by H. C. BEECHING. Ginn & Co., Boston, 1904. pp. 145.

Ideals and Practice in a University. A Pedagogical Experiment, by HARLOW GALE. The "Vineyard Press," Minneapolis, Minn. pp. 61.

Flachsmann als Erzieher. A Comedy. By OTTO ERNST. Edited with notes and vocabulary by Elizabeth Kingsbury. Ginn & Co., Boston, 1904. pp. 190.

Der zerbrochene Krug, von HEINRICH ZSCHOKKE. With introduction, notes and vocabulary by Herbert Charles Sanborn. Ginn & Co., Boston, 1904. pp. xvi + 76.

The School of the Heart, by MARGARET FLETCHER. Longmans, Green & Co., New York, 1904. pp. 109.

La Mère de la Marquise et La Fille du Chanoine, par EDMOND ABOUT. Edited with notes and vocabulary by O. B. Super. Ginn & Co., Boston, 1904. pp. 227.

Elements of the Differential and Integral Calculus, by WILLIAM ANTHONY GRANVILLE, with co-operation of Percey F. Smith. Ginn & Co., Boston, 1904. pp. 463.

Excursions and Lessons in Home Geography, by CHARLES A. McMURRY. Macmillan Co., New York, 1904. pp. 152.

A First Book of Algebra, by JOHN W. HOPKINS and P. H. UNDERWOOD. The Macmillan Co., New York, 1904. pp. 245.

Graded Art Readers. Book Two. By ELLEN M. CYR. Ginn & Co., Boston, 1904. pp. 136.

Earth and Sky, by J. H. STICKNEY. Number I, 1904, pp. 115. Number II, 1903, pp. 118. Number III, 1904, pp. 160. (Study and Story Nature Series.) Ginn & Co., Boston.

The Elements of Analytic Geometry, by PERCEY F. SMITH and ARTHUR SULLIVAN GALE. Ginn & Co., Boston, 1904. pp. 424.

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INTERNATIONAL CONGRESS OF CHILDHOOD AT LIÈGE.

In connection with the international exposition to be held at Liège, Belgium, from April to November, during the coming year, it is proposed to hold an International Congress of Childhood, from September 17 to 20 inclusive. The purpose of the congress is to consider the best means of promoting the physical, intellectual, and moral development of the young in the home, the school and society.

The congress will be organized in four sections, as follows: (1) Education of Children; (2) Study of Children; (3) Care and Training of Abnormal Children; (4) Parents' Associations, Mothers' Clubs and Other Supplementary Agencies for the Improvement of Youth. Membership in the congress is solicited from educational institutions and associations, societies for the protection and guardianship of youth, students of the psychology of childhood, teachers, philanthropists, and parents. The membership fee (ten francs) may be sent direct to the secretary of the congress, Louis Pien, No. 44 Rue Rubens, Brussels, Belgium, or to any member of the American committee.

To promote an interest in the Liège International Congress in the United States, the commissioner of education has appointed the following American committee:

Chairman, Prof. M. V. O'Shea, University of Wisconsin, Madison, Wis.; secretary, Prof. Will S. Monroe, State Normal School, Westfield, Mass.; the Hon. Alfred Bayliss, State superintendent of public instruction, Springfield, Ill.; Miss Ellen M. Henrotin, Chicago, Ill.; Prof. A. Caswell Ellis, University of Texas, Austin, Tex.; the Hon. Richard S. Tuthill, Chicago, Ill.; Prof. William H. Burnham, Clark University, Worcester, Mass.; Mr. Charles W. Birtwell, Children's Aid Society, Boston, Mass.; and President E. G. Lancaster, Olivet College, Olivet, Mich.